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GLEANINGS

A JOURNAL DEVOTED
TO BEES
AND HONEY
AND HOME
INTERESTS.

BEE CULTURE

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No. 13.

STRAY STRAWS

FROM DR. C. C. MILLER.

ABOUT 52,000 bee-keepers. Mr. Cowan estimates, are in England and Wales.

ALL IN ALL I like the new Corneil smoker better than any other smoker I ever tried.

MORE GOOD PEOPLE are in the world than we sometimes suppose. Every little while I find some new ones.

A PRIME SWARM, says Doolittle, p. 484, "is often erroneously called a first swarm." Why "erroneously"?

HAY FEVER is what Somnambulist, in *Progressive*, thinks is the matter with me. Caught from sweet-clover hay.

ALFALFA is a thing that I supposed belonged outside of Illinois; but farmers in Northern Illinois are beginning to experiment with it.

PRETTY LATE to experiment with sweetclover this year; but you might still try cutting the big stalks to see whether stock will eat them when dried.

I CAN REMEMBER when clover yielded honey, but it wasn't last year nor this year. [Why don't you move over into the basswoods of Wisconsin, not far from you?—ED.]

THE HIVE DISCUSSION should stop—if it continues to bring out good points—in about five years from now. [Do you mean it should or shouldn't stop? Don't catch on.—ED.]

S. E. MILLER, in *Progressive*, thinks the form of hive, shallow or deep, doesn't matter much, because in a state of nature bees don't care whether a hollow log is perpendicular or horizontal.

J. B. HALL'S PICTURE graces the pages of the *Canadian Bee Journal*. Friend Hall is very economical of ink, but he knows a lot about bees. [That's so. Too bad he doesn't write more.—ED.]

THE UNION of the Bee-keepers' Union and the North American, shall it be or not? Better

discuss it thoroughly in print than to take time to discuss it at Toronto. [Yes, yes; the sooner the better.—ED.]

GOLDEN QUEENS are offered by 11 advertisers in last GLEANINGS, and 11 others offer plain Italians. In the market for queens, as well as for comb honey, looks go a great way.

B. TAYLOR, after inventing and using for many years the sectional brood-chamber, takes away one's breath by saying in *Review* that he prefers the single brood-chamber. [Will he tell us in full why?—ED.]

AFTER-SWARMS often have a number of queens accompanying. If instinct impels so many to leave, what holds any in the hive? or will all leave if all are out of cells? [Yes and no. No, I don't know.—ED.]

THE *American Bee Journal*, in the person of Geo. W. York and wife, honored the Miller family with a visit June 12. Brother York brought along his usual stock of good nature, and we had just the best kind of a time.

HASTY tells in *Review* how to prevent swarming, and ends up by saying: "There, my bees bother me so with their swarming that I can't find time to tell you any more about how perfectly easy it is to prevent all swarming."

F. C. MORROW, taking pity on my honeyless condition, has sent me some Arkansas honey. In appearance the honey compares with the best, and only needs improvement in flavor to bring price of gilt-edged section honey.

IN TAKING OFF honey-boards or any thing else with dauby burr-combs under, just raise up enough to break the burr-combs and then let down again. In an hour or so you can remove and find the burr-combs licked dry.

YOU MEDINITERS—no, I didn't say dynamiters—have never told us yet whether fastening wires by electricity was the right thing for us common every-day bee-keepers. [Yes, sir, if you can make it work. We have no trouble.—ED.]

TIN PANS, HORNS, etc., are generally condemned as no good in making swarms settle. S. T. Pettit, one of the Canadian veterans, says

in C. B. J. that for 15 years he has not failed to make an absconding swarm settle by vigorously ringing two good cow-bells, keeping always in front of the leaders of the swarm.

GEODES are not a peculiarity of Tampa Bay, friend Root. I found many of them near Johnstown, Pa., in a deep cut made for the Pennsylvania Railroad. The water doesn't get inside the stone; the stone grows around the water.

DOOLITTLE has been misunderstood to claim that all five-banders have the same origin. He explains in *Progressive* that others have produced them from Syrian, Cyprian, and other bees, but he thinks all the five-banders of *Italian* origin have come from Mr. Hearn or himself.

CANADIANS have in general held out against wiring frames. The last *Canadian Bee Journal* touches the subject in a gingerly manner—doesn't approve, doesn't condemn—just says that the method of fastening wires by electricity works beautifully. On this side the line the wiring works beautifully too, whether fastened by lightning or not.

SAYS DOOLITTLE, in *Progressive*, "I have been in the bee-business as a specialist for the past twenty years, yet I feel that what I don't know of the business stretches out wide and vast, away out into the unknown; and I sit as a child at the feet of some vast problem, much of which is beyond my comprehension." Shake, brother Doolittle, shake.

THIS TROUBLES ME: Some report—particularly in Europe—that very strong colonies with unlimited brood room do nothing but rear bees to be fed, while other colonies with limited room for breeding lay up a surplus; and on the other hand we have reports where it's the unlimited room for the queen that goes with the surplus, and little brood room means little surplus.

FOR SHADE over hives standing in the sun, try this: Cut some grass—long slough grass if you have it; pile it on the hive six inches or more deep, and anchor it with two or three sticks of stovewood. Lift cover and all, and it will last through the season. But I want shade over myself as well as the bees. [So do I; but somehow it is not always convenient to have it so.—ED.]

A SMALL NUMBER have for years paid an annual tax for the benefit of bee-keepers in general. Is it fair to continue the Bee-keepers' Union in that way? Is there no way by which a large number can become interested in the Union and the North American? Large membership is the thing to strive for, rather than large attendance at meetings. In union there is strength. [How would it do to have smaller membership fees and a larger membership? I think it would be well to consider this.—ED.]



LARGE VS. SMALL HIVES.

WHY IT IS A QUESTION OF LOCALITY; A GOOD ARTICLE.

By J. E. Hand.

Editor Gleanings:—I have read with much interest the discussion on the subject of large v. small brood-chamber hives. This is a subject of vital importance to the bee-keeper, and one on which depends his success or failure in the production of surplus honey, perhaps, as much as on any other one thing except, possibly, location. I am persuaded it is all a matter of location, and length and time of honey-flow, that must ever decide this question of whether a large or small brood-chamber hive will give the best results in surplus honey. There can be no iron-clad rules laid down in regard to this matter, but it should be carefully considered and decided upon by each bee-keeper for himself, and according to his location, and time and duration of honey-flow, etc. Because a bee-keeper in Colorado has splendid success in the production of comb honey with a twelve or even fourteen frame hive, it does not signify that I should not have as good or even better success in my location with an eight-frame hive than with his large hive.

I will try to explain why it is altogether a matter of location. In the first place, every bee-keeper in the North (especially in Central Iowa, where I have kept bees for the past 12 years) knows that the hardest thing for us to do is to get our hives full of bees and brood in time for the white-clover harvest, which usually begins about June 1st, after which basswood opens about July 1st, and lasts from 5 to 20 days, according to the season, conditions of the weather, etc., 21 days being the longest flow I have ever known from basswood in Iowa; and as we do not have any surplus from fall flowers, our harvest closes with basswood, about July 10 to 15. Now, then, it is conceded by our most scientific apiarists that a bee does not become a field-worker until about 16 days old; and as it takes 21 days from the egg to the bee, then 37 days must elapse from the time the egg is deposited by the queen until it becomes a field-worker; hence all eggs laid after 37 days prior to the honey-flow which yields your surplus become worse than useless, because they become consumers instead of producers; and it has cost much honey and time of the workers to raise them, which might otherwise have been employed in gathering honey from the fields.

Now, then, 37 days prior to July 1st brings us back to May 23d; hence it will be seen that all eggs, in order to produce workers for the bass-

wood crop, which ends the surplus for the year, must be deposited by the 23d of May. Now, then, brother bee-keepers of Central Iowa, how many swarms would you have in 100 that would have eight frames, or even six, full of brood by May 23? After an experience of 12 years in Iowa I will venture to say that, one year with another, you would not have 25 hives out of 100 that would have even six frames full of brood by the 1st of June. Some seasons it is so cold during the fore part of May that it is impossible for the bees to care for so much brood at that season.

Now, in view of these facts how absurd it would be to advocate a ten, twelve, or fifteen frame hive for such a location! Why, any practical honey-producer can see at once that his surplus would go to fill up those empty combs in that brood-chamber, instead of going into the sections. As for me, I want a brood-chamber for brood, and it must be of a size that an average queen and colony of bees can fill with bees and brood in time to gather the white honey whenever it comes.

After years of careful study and experimenting along this line, with the above-named conditions to face, with eight and ten frame hives side by side, I have decided in favor of the eight-frame every time, for comb honey. This is for Central Iowa. On the other hand, in a location where the honey-flow does not come so early in the season, and continues all summer, an entirely different system would have to be practiced. For instance, in the San Joaquin Valley, in California, the surplus is gathered principally from alfalfa and fall weeds, and other flowers; in fact, nearly every thing that blooms yields honey to some extent; but their swarming is all over long before the harvest begins; and the more swarms they can get, the more honey they expect; and the parent colony has plenty of time to build up and get ready for the harvest from alfalfa, which continues to yield during the entire summer, and sometimes even to the first of November.

Now, in such a location as this it would be foolishness to advocate an eight-frame hive, for it is very important that the queen be coaxed to lay to her fullest capacity to produce workers for such a continuous honey-flow.

No, brother bee-keepers, this subject of large or small brood-chamber hives can never be governed by any fixed rules, but must ever be a matter of location, and time and duration of the honey-flow from which we obtain our surplus.

I will close by saying that I have no pet theory to bolster up, and will use the hive that gives me the best results in the production of honey, every time, if I can find it, and I think I have found it at last; and if this escapes the wastebasket I will at some future time tell the readers of this journal the hive I like best of all, and why.

J. E. HAND.

Wakeman, O., May 15, 1895.

[This article, it seems to me, states the situation exactly; and, no matter what has been said to the contrary, I think locality accounts very largely for the difference in opinion and experience. Indeed, it could hardly be otherwise. Competent and intelligent witnesses have testified in favor of the large or small hive, and from their standpoint and locality we can hardly question the soundness of their argument. Why, then, should these good witnesses differ? That little word "locality" explains it all. As I said in an editorial in our last issue, light is surely breaking. While some localities most assuredly require large hives, other localities want nothing larger than the eight-frame size, Langstroth; and our experience and orders show that a majority of bee-keepers are and have been situated like our friend J. E. Hand, as above.—ED.]

BOX OR MODERN MOVABLE-FRAME HIVES.

WILL BEES STORE MORE HONEY IN THE AGGREGATE IN THE ONE THAN IN THE OTHER?

By C. Davenport.

In GLEANINGS for March 15, in one of the editorials we read: "The old statement that bees will store as much honey in an old nail-keg as in the most improved hive still stands practically uncontroverted." Now, I do not know that I can say any thing to controvert that statement; nevertheless, I do not believe that bees will store as much in a nail-keg, or, what is practically the same thing, a box hive, as they will in a modern hive, for I have kept some bees in box hives for a long time, and still have about 20 colonies in such. The largest yield I ever got from a colony in a box hive was about 80 lbs. This was secured by having holes in each side of the hive, over which boxes that would hold 20 lbs. each were fastened. There was also one on top, which they filled twice. I got them to work in these boxes by fastening pieces of comb in each one. This colony did not swarm that same season, which, by the way, was a good one; in fact, it was the best season for honey that I ever saw. A colony in a 10-frame hive stored 237 lbs. in 2-lb. sections—not by guess, but by actual weight. This is the largest yield I ever got from a single colony. I also made four new colonies from this one, and had them in first-class shape for winter. It was done in this way: This colony, which was a very strong one, got the swarming-fever just at the beginning of the white-clover flow. I did not wait for them to swarm, but removed all their brood, and gave them frames with only narrow starters of foundation in them. Now, I believe that, according to theory, a colony thus treated should not store any or work in sections until the brood-nest is full. But in actual practice a colony thus treated will, if the super is put on with one or two bait-sections, and the rest filled with full sheets of foundation, go to work in them at once—that is, in a good flow. I took those frames of brood with but very few bees on them, and divided them up into four hives;

and as soon as a few bees in each hive had hatched I gave them a laying queen, and then built them up by feeding and giving them frames with full sheets of foundation as fast as they could use them. At this time of the year it is warm, and no danger of robbing, and they will build up faster than one would suppose.

That same season from 40 colonies, spring count, I secured nearly 150 lbs. of surplus from each, and made a very large increase by the method I have just described. But perhaps I should say that all these colonies were very strong ones. They were the best ones that could be picked out of over 150. They also had a very good range, and at that time they were practically all the ones there were to work on it. But now if these colonies had been in box hives, would they have stored that much honey? I do not believe that they would—at least, it is certain that I could not have got them to do so.

Another old statement is, that one who keeps bees in box hives, and uses a starch or cracker box on top for a super, will get as much surplus. True, but not in as marketable shape as the one who uses improved hives. In this locality the former will not get as *much*, nor half as much; for, from some cause or other, bees in a box hive will not go up through a hole or holes in the top, and store as much honey in a box inverted over the same as they will in a super over a frame hive; for, with a very few exceptions, a small boxful on top makes them think it is time to swarm, and there is no way to prevent them that I know of—at least, no way either to prevent or to allow them to swarm, and still get a surplus by using box hives; for a swarm that is hived in a box hive will not fill a box on top at once, as they will a super where a frame hive is used. And now suppose that, from the same yard, the same day, we have two swarms issue that are the same size, and just alike in every way; say that we hive one in a small frame hive, the other in a box hive that is large enough to hold all they can possibly store, without having to go up into a box on top to work; which one will store more? I believe I can get the one in the frame hive to store at least a third more by using sections, with full sheets of foundation in them; for while, in some seasons, I think as some others do, that there is not much advantage in full sheets, as a rule I believe we can get a good deal more honey by using them. But I do not think foundation is the only thing that will cause the colony in the frame hive to store the most. I think that shallow supers and the tiering-up system enables or causes bees to store more than they will when they are given as much room all at once as would be necessary in the case just mentioned. But by keeping bees in box hives, and hiving the swarms from them in small frame hives, and using supers, etc., in the usual way, we can get

good returns from them provided they winter well, and then swarm at the right time. But, no matter what kind of hive we use, or what kind of bees we have, we shall sometimes lose one or more queens during the winter, and quite often a young queen will be lost when she goes out to mate.

The reader will now readily understand that a colony, in either case just mentioned, has at that time no brood from which they can rear a queen; and when a colony in a box hive loses its queen at such a time, it is a good deal more work, and much more difficult to remedy the matter, than it is when the same thing occurs in a frame hive.

Another old statement is to the effect that it is easier, and less work, to keep bees in box hives. I can not agree with this either. In fact, I think it is right the other way, even if we are keeping bees merely for pleasure, unless those who winter them outdoors can do so with less loss by using box hives. But even if this is the case, the difficulty I have just mentioned will, I believe, balance this. If it will not, there are many other serious disadvantages in trying to use box hives that surely will. Now, on the other hand, if we are keeping bees for pleasure, and also all the profit we can get out of them, I believe we can not only produce honey with less work, but that we can get *more* of it by using improved hives.

Southern Minnesota, June 5.

[Friend D., I do not think there is any conflict in our views, if I understand you correctly. Referring to the editorial in question, speaking of hives, I said, "Construction may enable him also to secure a little more marketable honey, and perhaps a little more in the aggregate. The old statement, that bees will store as much honey in an old nail-keg as in the most improved hive, still stands practically uncontroverted." You will see from the above that I do not say that modern hives would not give any more honey, nor that they would not produce more marketable honey; but I still think that a box hive, under normal conditions, having the same cubic capacity as a modern movable-frame hive containing section honey-boxes, will produce practically as much honey in the aggregate (not marketable) as any other.—ED.]

BEE-KEEPING IN DIFFERENT COUNTRIES.

DOES IT BECOME LESS PROFITABLE AS CIVILIZATION ADVANCES?

At the recent convention of Ontario beekeepers, W. Z. Hutchinson rather argues that, as a country becomes settled and civilization advances, bee-keeping is likely to become less profitable. Under such circumstances we should probably feel justified in expecting that, in the long-settled countries, the number of hives kept would be very small. Such is, however, not the case. Germany has 1,900,000 hives; Spain, 1,690,000; Austria, 1,550,000; France, 950,000; Holland, 240,000; Russia, 110,000; Denmark, 90,000; Belgium, 200,000; Greece, 30,000. The

value of the annual production of honey and wax is estimated at \$14,750,000. There is, undoubtedly, reasonable ground to believe that some districts have greater advantages for the production of honey when first entered by the settler; but as a rule the flowers in a state of nature are in time replaced by another growth, artificial and natural. The increased skill of the bee-keeper, of course, overcomes some disadvantages. In Switzerland there are 2367 bee-keepers, possessing between them 10,509 stocks; this makes an average of less than five colonies to each. Very few possess as many as thirty; and in looking over a long list we find one having as many as 80 colonies. The bees will then be pretty well distributed; but imagine the number of colonies kept to the size of country. We find the number of square miles in each country as follows:

Country.	Square Miles.	Colonies per Sq. Mile.
Germany	208,027	9.00
Spain	200,000	8.45
Austria	115,903	13.37
France	204,000	4.65
Holland	12,648	18.09
Russia	2,950,000	1.00
Denmark	14,124	6.37
Belgium	11,373	17.49
Greece	25,000	1.20
Ontario	219,640	.74
Canada		.06

These countries practically consume their own production of honey. Owing to their age they are a more scientific people, and, owing to the small amount of earning, they have to be an economic people. Science and economy will teach people to consume honey. Very few of our Canadian people are aware of the value of honey as a food. Bee-keepers *must* exert themselves in this direction until it becomes the habit of the nation, when the custom will perpetuate itself. If we look at the value of bee-keeping in a country, it is inestimable. Europe produces nearly eighteen million dollars' worth from what would otherwise go to waste; and not only that, but in the fertilization of flowers it in all probability adds a similar sum to the wealth-producing powers of the country. Bee-keepers are surely fully justified in feeling that their industry represents nothing insignificant, and that it will stand on just as high a plane as they may place it. If they call it a trifle, a bagatelle, and the like, they must not blame the public for placing it at no higher standard.—*Canadian Bee Journal for May.*

A COLORADO LETTER.

FROM OUR OLD FRIEND M. A. GILL.

Editor Gleanings:—I have been much interested in your notes from Florida upon its products, its climate, and its people, and take this opportunity to say that I too have been rambling since you last heard from me. A person

coming from a humid region to an arid one is lost for something "green," and he generally turns his eye inward and thinks he sees the *greenest* thing yet—the people who leave a country whose crowning beauty is in its grassy slopes and leafy bowers, for the desert-like plains of the irrigable lands of the great West. But if he will stay until the water is turned on, and see the worthless-looking soil give up its burden of three or four crops of alfalfa in one season—see peach, pear, prune, or apricot give growth from six to ten feet in one season, he is generally spellbound and thinks, perhaps, that these facts should be added to the seven wonders. Truly this is a wonderful land of ours, and has a great variety of products and climatic conditions.

This is a good country for bees, both in this valley and up the Gunnison River, wherever alfalfa is raised in large tracts. Cleome also is found in large quantities, which yields large amounts of honey some seasons.

The one great drawback to bee-keeping in this valley will be foul brood, as it has got a start about ten miles from this city, and the slipshod bee-keeper, who abounds and seems to thrive in this country, will no doubt spread the disease faster than the vigilant eye of the inspector can detect and destroy it.

Bees at this time are breeding fast, gathering pollen from natural sources, and some honey from apricot-bloom. Peaches will be in bloom in two or three days, which will be followed by apple and pear. There are about 4000 acres of bearing orchard around this city, and it is estimated that as much more will be set this spring.

Western Colorado is earning a reputation for its large crops of fine-flavored fruit. I am having a mild attack of fruit-fever, and have taken as a remedy 5 acres of new land at \$100 per acre, and am setting it out to apples, pears, peaches, prunes, plums, nectarines, apricots, cherries, almonds, with strawberries and raspberries between the rows. I have purchased 25 colonies of bees, and will try to grow into my old-time number of 150 in Wisconsin.

While reading your experience with the two Indians in Florida I was thinking of mine here. Last Sunday my son Ernest and I mounted our wheels and went out to visit the Teller Institute. It is situated two miles east of the city. It was built by the government, and named in honor of Senator Teller, of Colorado, who took a great interest in promoting the enterprise. As we neared the school we found the large gate open; and as we wheeled into the campus we were soon surrounded by 126 Indian boys and girls who had just come out from their Sunday-school. Dinner was soon announced, when one of their number, acting as drillmaster, formed them in line and marched them in strict military order to the dining-room. Through the kind invitation of the superintendent, we followed. On reaching the dining-room each

took his or her place behind a chair at the dining-table; and at the tap of the bell each one stood with bowed head and reverently returned thanks for all the blessings that were around and about them. At another tap of the bell each took a seat and enjoyed a splendid dinner, gotten up by their own members who have charge of the culinary department. I said to myself I was thankful I lived in a land where the light of learning is being carried to those uncultured minds. I could see that each one, as he returned to his respective tribe, would be a nucleus for much future good. But the system to me seems yet incomplete; for, so long as their tribal relations exist, many will drift back to their former modes and manners, and can not accomplish the good they could if they were made full citizens, and given land in severalty.

In changing from Indians back to bees I will say I should think it would pay you or some one else to establish a branch house for the distribution of supplies here or somewhere on the western slope of the Rockies, as the freight is nearly as high from here to Denver as from here to Medina.

Bees have wintered well here, and are rich in old stores—a condition which is very desirable where bees fly nearly every day in the spring, but gather nothing.

I will say, in closing, that we are all in good health, and are nearly in love with this country, as we have good schools, good churches, and good society; and we hope to live so as to add to instead of taking from the good things to be found in this land.

Grand Junction, Col., April 8, 1895.

T SUPER VS. SECTION-HOLDER.

THE MATTER DISCUSSED FURTHER

By Dr. C. C. Miller.

I had hoped before this time to notice the editorial remarks on page 354. Perhaps you have fondly hoped, Mr. Editor, that I wouldn't. You say, "We boomed the T-super arrangement in our 1895 catalog harder than ever, putting in a nice wood cut. But our packers hardly know what it is." Yes, you made a nice picture of it, and all that; but then you said the section-holder is better. Now suppose you leave out the booming picture; don't say a word in praise of the T super; give high praise to the section-holder, and then make the remark that the T super is better than the section-holder. Then see if your packers won't know what the T super is. The point I'd like to have you see is, that all your booming isn't booming at all. You might just exactly as well not put the T super in your list at all, so far as beginners are concerned, as to put it there with picture and high praise, and then say, "We

consider the section-holder superior to any other."

I asked you to name a single feature of the section-holder better than the T super. To this you make no attempt at reply, except to say, "T supers were not very well adapted to the Dovetail hive without making supers of different lengths from the regular hive-body." That is, the reason that the section-holder is superior is because it looks better to have a super the same length as a hive-body. And for that matter of looks you advise beginners to use an inferior article! I believe in looks, but I don't want inferior bees just because they are handsome, and I don't want a super for looks. In the picture of the T super you have four pieces nailed on to make out the length. One of those pieces would work just as well as the four.

You say the single-tier wide frame "seemed to have all the advantages of the T super." Without mentioning any thing else, let me ask whether the wide frame has the advantage that a section of any width can be used in it.

You disavow the idea of calling me an old foggy; but then you make me tear my hair with rage by saying that I prefer the T super because I have become accustomed to it, and my habits of working fit it better than any thing else. Now look here; don't you know I was accustomed to the wide frames, and that my habits of working fitted them? I had raised tons of honey with wide frames, and had an invention of my own for emptying them; that you thought worth describing and illustrating. I threw aside the hundreds of wide frames I had, both single and double tier, and adopted the T super. Why shouldn't I be just as willing to throw aside the T super for something better?

And while we're on that point, will you please tell us what advantage the section-holder has over the old wide frame? Certainly not ease of manipulation. The only advantage I can think of is that the tops of the sections are uncovered the same as in T supers. You have said that T supers are far better than wide frames, and now how can you say wide frames are better than T supers simply because the top-bars are left off? And now you talk about old stoves just because I won't go back to wide frames without top-bars when the length of the hive fits them.

Let me give a bit of testimony that has some bearing. One of the veterans, whose opinion I'm sure you would respect, writes, "Section-holders are far inferior to properly constructed T supers, and I congratulate you for voicing the fact." Another man writes, "I got the section-holders because Root said they were the best. I had used T supers in old Simplicity; but when they said section-holders—why, section-holders it was. But I must say I was never satisfied with them. . . . and I bought T

supers this spring to take the place of the section-holders."

In the *American Bee Journal* for June 6 occurs the question, "Which are better—T supers or wide frames without top-bars, called 'section-holders'?" Of the 24 who reply in the Question-box, some don't know; some think both are good; some think neither; one thinks section-holders better, and ten think T supers better. Pringle, Dibbern, and Doolittle prefer wide frames with top-bars. If I were obliged to give up T supers and go back to wide frames I should want top-bars on them; but I think I should want the frames deep enough so the top-bars would be a quarter of an inch above the tops of the sections.

EUCALYPTUS HONEY.

Considerable discussion has taken place with regard to the standing of honey from eucalyptus, in English and Australian journals. Much honey is obtained from eucalyptus in Australia, and the people of that country do not take it in the most kindly manner because the papers of England think the honey in question not suitable for the table. A letter from J. D. Ward, of Sydney, gives some light on the matter. He names eleven varieties, and says there are numerous others. Among them are a number of gum and box.

"Honey from box is generally considered the best, though that from iron-bark, shiny-bark, and some of the gums is excellent."

"*Not a single variety of eucalyptus yields a honey that has what is known as the eucalyptus flavor.* A few years back some bright genius mixed a small quantity of *eucalyptus extract* into a quantity of honey, and tried to sell it in England as Australian honey for its medicinal properties. Of course, it was unfit for the table, and of course it gave Australian honey a bad name. It would have been all right if sold as a medicine, and labeled '*Eucalyptus and Honey.*'"

"I am sending you a sample of honey I extracted last month (February). It is mostly iron-bark, but honey gathered entirely from iron-bark is better."

"Eucalyptus extract is a volatile oil, double-distilled from, I believe, the blue-gum only, though I have no doubt it could be obtained from other eucalypti. It is used here very largely in the treatment of colds, sore throats, etc. I send you a sample; and when you get it, if you put a few drops into half a teacupful of your clover or basswood honey, and stir it well, you will have eucalyptus honey that is 'not fit for the table.'"

The bottle of honey Mr. Ward was kind enough to send was, unfortunately, broken on the way, so that I had not a fair chance to test it. From the little I could scrape up to taste, I should say it was somewhat in flavor like a sample of our fall honey, not equal to the best, but by no means unfit for the table. But, as I

said, I could not judge fairly; and it is possible it may have gained a flavor from the wood of the box into which it ran. The eucalyptus extract, while it might rank high as a medicine, has a very vile flavor for use on the table.

Marengo, Ill.

[There, Dr. M., I am glad you have handled me without gloves, because it gives me a chance to "talk back." Well, in the first place I would call you "old fogey," but you are in pretty good company, and I fear I might have a buzzing of bees or something of that sort around my ears.

Now, then, as you have asked point-blank questions I will try to answer them point-blank. In the first place, in the previous issue I took back the word "booming," so I will acknowledge I am knocked out there to start on; but when you raise the question about leaving out the picture, and not saying a word in praise of the T super, praise the section-holder, and then say the T super is better, and that our packers would not know what it was—well, I just won't give in. I will tell you why. You go on the bicycle as I do among bee-keepers, and see how section-holders, modifications of them, are used—that is, topless wide frames, and you would conclude there is a very large following who would have them, no matter what we said of T supers. We are now pushing self-spacing frames, and recommending them in preference to loose-hanging; but there are thousands of bee-keepers who will not have a self-spacer, no matter what we say in favor of them. According to your reasoning every bee-keeper, nearly, ought to be a user of self-spacers because we say they are better.

Now, you ask me to name a *single feature* of the section-holder better than a T super. I will name several of them. 1. In some localities it is desirable to shift the outside row of sections to the center, and *vice versa*. You can not do that practically with the T super without a good deal of picking and fussing. Section-holders permit of handling the sections in lots of four at a time, with perfect safety. True, you say you can pick up four sections from the T super; but you must pick them up by the adjacent corners—not an easy thing, by the way, when a T super is full or partly full of sections.

2. Again, loose T tins are more or less of a nuisance, and once in a while get bent; and to have them fixed stationary is not very satisfactory.

3. The T tins take up a little space between each section; and if sections are inclined to be diamond-shape, one set of sections will point toward each other, and another set away from each other, making a difference of from $\frac{1}{8}$ to $\frac{1}{4}$ inch, depending upon the amount of play in the super. Oh, yes! you say you can and do obviate that by putting in little strips of separator stuff to fill up the cracks; and here, again, you have three little strips of separator stuff and three loose T tins to handle over every time you handle sections. But the facts prove that the very great majority of T-super users do not use those little strips of separator stuff, or any substitute; hence nearly all sections filled in T supers are more or less diamond-shape. As the section-holder does hold the section square, the average run of bee-keepers using such will have square sections that will crate.

4. But a very important advantage of the section-holder arrangement (not possible practically in the T super) lies in the fact that separators full width may be used, covering section-holder edges and the upright edges, and

horizontal edges of the section, not scored out for bee-ways. This, taken in connection with compression by means of a follower-board and wedge, closes up all little spaces; and the consequence is, the edges of the sections are practically free from propolis-stains, and do not therefore require scraping to the same extent that sections do from T supers. Indeed, there is no comparison. This is no theory. The honey we buy, produced in section-holders, looks better, so far as the propolized edges are concerned, than that produced in T supers. I can (or think I can) spot a T-super section every time. This compression idea I got from Mr. Manum, in Vermont, and from some other practical bee-keepers in York State, while on my first bicycle-tour. When I arrived home I incorporated it in the section-holder device as as soon as possible.

5. The great mass of bee-keepers (and that means, I think, the great majority) do not scrape the sections before putting on the market. Now, I do not guess or think, but *know*, that filled sections from section-holders with wide wood separators, and compression, present a far cleaner appearance, so far as propolis is concerned, than do those from T supers. Our position as buyers of comb honey, from all over the country, from large and small producers, places me in a position where I know whereof I speak.

6. Again, T supers require some rather nice or complicated methods of emptying them out—see our A B C, and Year Among the Bees. The section-holder arrangement may be emptied by simply removing a wedge or tightening-strip, and then all are practically loose. By turning the section-holder upside down, and pressing the two thumbs near the center, all propolis connections are broken, and the sections are loose. The manner of emptying sections out of *section-holders* is self-evident; but out of *T supers* is not so evident—at least, it has been necessary to have nice engravings made, showing each step; and as good and clear a writer as the author of "A Year Among the Bees" did not make his plan of accomplishing the result plain to me without photos.

No, sir, Dr. Miller, there are hundreds of bee-keepers who would prefer the section-holder arrangement for the reasons I have given above. It is able to stand on its own bottom; and if what I have said by way of comparison is true—and I am sure there are lots of bee-keepers who will back me in this—we are perfectly justified in saying what we firmly believe, that the section-holder arrangement is better. You evidently feel that I do not think the section-holder is quite as good as the T super, and that, because of the mechanical convenience we boom it in preference to the other, and for no other reason.

As to the matter of looks in the T super, there is not one customer in a hundred who would accept it if the cleats were all on one end as you suggest. The outside cleats on both ends are intended in lieu of hand-holes, and for the purpose of giving a symmetrical and finished appearance to the super when placed up on a hive of greater length.

You ask if I don't know that you are accustomed to the wide frames, and that your habits of working fitted them. Let me ask another question. Are you accustomed to the section-holder, and do your habits of working fit them? You are accustomed to handling hundreds and hundreds of T supers against five or six of the section-holder arrangements. How can you fairly appreciate the section-holder.

[This is a question that could be argued a good deal; but the individual preference, and that old bone, "habits of working," will keep

those that have been using the one and the other largely in the line that they have been accustomed to. Now, doctor, don't you intimate again, that we recommend the section-holder because, perhaps, from a mechanical point of view, it may be more convenient, or—or—I'll jump on that "bike" for Marengo, and, arriving there, "talk it out" or chuck you in that stove that you are saving for me.—Ed.]

CALIFORNIA ECHOES.

By Rambler.

"Overeating shortens a man's life." So says truthful Dr. Stray Straws. And why does a man overeat? The dear well-meaning cherub who engineers the cook-stove thinks her "hubby" must have all the fancy dishes going—spiced, larded, sweetened, frosted; and the poor stomach, unless of cast-iron qualities, soon breaks down.

Now, I will go you one better, Dr. M. Half of the modern cooking is a waste of time and material, and a delusion and a snare. Remedy—come out to California, and back on a bee-ranch, where you can cook your own Aunt Sally pancakes, lunch on crackers and cheese, and dyspepsia will fly away.

We are glad to note two arrivals of bee-men who propose to make California their future home—the Hon. J. M. Hambaugh of Illinois, and Mr. H. Y. Douglass, of Texas. The latter thinks California has charms even greater than the much-lauded Lone Star State. Well, he is not the only one to entertain such ideas.

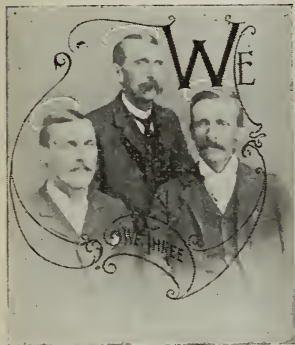
Mr. G. K. Hubbard, of Riverside, Cal., has produced over one ton of orange-blossom honey. It is a strictly fancy article, neatly labeled with labels from the "Home of the Honey-bees. There is no slipshod management about Mr. Hubbard's apiary, and a few more such expert bee-keepers would have a marked influence upon the value of our products in the markets.

The California honey-yield will not be so large as the opening of the season warranted us to expect. The greater portion of the month of May was cool and foggy. The flowers were abundant, but the elements were against the secretion of nectar, and also against the free working of the bees to secure the nectar secreted. The honey already secured is of fine quality, water-white, and well ripened. There will be many carloads to ship, but we predict that the yield as a whole will not be as large as it was in 1893. Many considered the yield then as only a half crop.

After studying every phase of the Heddon-Danzenbaker controversy I have come to the conclusion that Mr. Heddon ought to pay Danzenbaker a fair sum for inventing a hive. The D. hive will probably not cut much of a figure against the H. patent. Its chief utility so far consists in being a good advertisement for the latter, and good advertising should be paid for.

RAMBLE 135.

OFF FOR EUREKA.

By Rambler.

spent Sunday in Blocksburgh; and though it is a town of about 200 population, and has a thriving school of about 100 scholars, there are no gospel services, no Sunday-school, no church. The stores were open, and seem-

ed to do a thriving business during the day, and from early morn until late at night the two saloons were well patronized. During our sojourn in town we noticed one citizen in particular who was a daily patron of the saloon. He was at one time a large owner of land, sheep, and a squaw; he had reformed from his squaw condition, married a white woman, and now had a family of four bright children. Hard times came knocking at his door, and a mortgage upon his property had caused a relapse of his moral condition, and the cup was his daily solace. Result, a careworn wife and shamefaced children. The many elegancies in the home gave evidence of a woman of taste and culture; the piano stood unopened; there was dust upon the music-rack; no merry songs ascended from that home now. It was tears and moans and prayers. The house could not have been more sad with crape on the door. Every day at about noon the father returned from the saloon, bleary-eyed, unsteady of step, and maudlin of speech; and he spent the afternoon in drunken lethargic sleep. Thus again a bitter picture of the rum-traffic thrusts itself upon our attention. Perhaps a little church here, a little Sunday-school, a little exhortation, a little prayer, even if it save not the father, would save the sons from the ruin-strewn path of the drunkard.

Another character appeared upon the streets one morning. He was a tall spare man—a long old-fashioned muzzle-loading shotgun in his hand. He said he was a bummer by trade, but just now he was acting as a guide to a party of hunters bound for Mad River. He was known as "Dad," and it was "Dad, shall I do this?" or "Dad, shall I do that?" He was the most thoroughly daddied man I ever met. He had no end to deer and bear stories. His gun, his pack-mule, and his little dog, were all special favorites. The last glimpse of his outfit was when the whole party marched jauntily into

the forest, confidently expecting to return with a ton of jerked venison.

The climate and capabilities of this portion of California found a staunch advocate in the doctor and druggist. The very best of apples and pears can be grown here. Apple-trees, five years after planting, would yield five barrels of fruit, so the doctor stated; and the pears grown here are immense and luscious. The doctor believed the apple would eventually prove more profitable here than the orange in the south. He desired to make an impression upon us, for he evidently thought we three would make thrifty settlers. The old-timers there were too lazy to work; and when they wanted meat all they had to do was to go out into the brush and shoot a deer or a wild hog. Game of all kinds abounds—quail almost in town; rabbits plentiful. Any bee-keeper wishing to keep bees in a small way, and live a retired life, can here find just what he wants, and land at \$2.00 per acre.

We three finally bade the doctor, the shoemaker, the blacksmith, and Mayor Block, goodbye, and next camped upon Van Deusen River. When we arose in the morning, Bro. Pryal was missing. We knew where to find him, however; for out in the middle of the river, mounted on a rock, with pole in hand, in that favorite position of his; and how patient, and how satisfied—with bites!

We three are now passing rapidly toward Eureka, on Humboldt Bay; and what a grand drive among the mountains and the redwoods! We might say fifty miles of forests. Of course, there was now and then a space of brush, or a stage station, or a lone ranch; but now we came to the dense redwood forest, and for twelve miles we were overshadowed by the immense trees—trees fifteen feet in diameter; tall trees 150 and 200 feet or more. We three traveled leisurely, and stopped often to admire the forest. Now and then there would be a little break in the forest, and a wood-chopper's cabin or a place to make split shakes would appear.



"DAD."

We were told by the shoemaker, that, no matter how hot the weather outside the forest, we would put on our overcoats when we had gotten into it. The tops of the trees were so far

up, and the foliage so dense, that but a small amount of sun heat penetrated to the ground; and though we did not put on our overcoats, we felt a decided depression in the temperature. And how we three did appreciate the dim aisles of the woods! There was but little animal life



E. A. BRUSH AND APIARY.

in these dense shades, and the silent forest gave back only the echoes from our passing wagons.

We three bee-men would now and then see the busy bee, when we came to openings in the forest, indicating that some of those tall hollow trees were occupied.

Our redwood experiences, however, came to an end, and new experiences in a civilized community occupied our attention. In Hydesville we three very fortunately found a vacant photograph studio, several rooms adjoining, pleasant people downstairs. We three took possession, and for six weeks we sojourned in this pleasant town.

The observations of us three soon discovered the bee-keepers in town. The old box hive and let-'em-alone policy prevailed, and the number of colonies was not excessive. There were no complaints from the fruit-men, and we heard not a word about overstocking the field. The leading bee-keeper of Hydesville was Mr. E. A. Brush. Our acquaintance with him commenced in a peculiar way. While Mr. Wilder and I were trying to get a photo of the public school, and just as we pressed the button on the school, Mr. Brush, who lived across the street, and possessed a camera, pressed the button on us. We were oblivious of the fact until a couple of days afterward, when we were surprised and pleased to see the photo.

Mr. Brush is the ingenious man of all that portion of the country. Watches, jewelry, and guns are neatly and expeditiously repaired, and photographs taken. The latter is pursued more

as a side issue and as a means of recreation, though Mr. B. is an expert photographer, having followed the business for several years.

A swarm of bees came to Mr. Brush, and, like all ingenious men, he set to work to devise a hive; and though Mr. B. had never been interested in bees, had never read a journal or a book upon bee culture, yet our photo shows a veritable up-to-date dovetailed hive. The frames are not Hoffman, and the surplus sections not 1-lb.; but the nearness to modern ideas is quite surprising. The dovetailed idea was stumbled upon by using Winchester cartridge-cases, and the frames were made to fit them. The busy bees had filled their hives, and Mr. Brush is looking forward to the coming year with expectations of a bountiful harvest.

As to the sources of honey, we did not see much that would encourage a specialist. Our observations were made in October, and, not seeing the sages, the honey-flora must consist of spring flowers. Mr. Brush is not a bachelor, but has a well-ordered household, is a leading factor in the community of Hydesville, and a staunch advocate of Humboldt Co. as a healthful and profitable portion of California; is a dyed-in-the-wool Republican, and a handy man to have in the community.



CLIPPING QUEENS' WINGS.

Question.—Is it advisable to clip the queen's wings? What has been the experience with such queens? Are they more likely to be superseded by the bees than those having perfect wings?

Answer.—In nearly every apiary, where the manager can or is expected to be present during the swarming season, I should advise the clipping of all laying queens in the apiary; in fact, I should as soon think of going back to box hives as to the managing of an apiary where the queens have their wings so they could fly out with the swarm, where I was working the same for comb honey. I said, "in nearly every apiary." Why I said this was, there are a very few localities in the United States where ants are so thick on the ground, and about the hives, that it would not be safe to allow the queens to be out on the ground for any length of time, else they would be killed by

these same ants. But as such a place or places are rare exceptions, it would be safe to say that I would always clip the wings of all queens in the apiary as soon as laying. Some seemed to think that queens with clipped wings give far more trouble at swarming-time than do those having their wings; but I can not think that such have had much experience with clipped queens; for with myself I would rather manage three swarms where the queens are clipped than one whose queen can go with the swarm. Especially is this the case where there are trees in or about the apiary, whose height exceeds 15 feet; for where there are tall trees near the apiary the swarms alight so high that it is often more than they are worth to climb for them, while the clipping of the queens' wings does away with this climbing part entirely, if no after-swarms are allowed to issue. Without going over the whole ground regarding the advantages arising from clipping, it can be expressed thus: Clipping the queen's wings prevent swarms decamping, as a rule; saves the climbing of trees after swarms, or the marring of those trees by the cutting of limbs or the bruising of the same; makes it easy to separate the bees where two or more swarms come out in the air together; facilitates the hiving and managing of swarms, and gives the apiarist perfect control of the apiary during the swarming season. As to their being more liable to supersedure, an experience of 25 years says there is nothing in the claim put forth by some that such is the case; for during that time I have had very many such queens remain the profitable heads of colonies for three, four, and even five years. My impression is that superseding, as a rule, is caused by failure on the part of the queen as an egg-layer, and not on account of any clipping. I, unfortunately, in clipping a queen purchased of A. I. Root, a way back in the latter seventies, clipped off a whole leg and a foot off another, besides the wings; but this seemed to make no difference, as she did her duty well for over four years, and then lost her life by carelessness on my part.

CHANGING QUEENS AT TIME OF SWARMING.

Question.—Wishing to Italianize my bees I have thought that it might be done by changing queens at time of swarming; therefore I would ask if, in hiving either one or two swarms upon the old stand, or in a new location, would it be safe (by removing the queen or queens) to let a strange queen go in with the swarm?

Answer.—The changing of queens, upon the hiving of any swarm of bees, in any place, is liable to "raise a rumpus;" and especially is this the case where the swarm is hived upon a new stand; for in this case the least disturbance or dissatisfaction will send the swarm whirling back home. The chances of failure are too great for all practical purposes, with a single warm hived in a new location. Where two or

more swarms cluster together, if the new queen is placed in a large cage made wholly of wire cloth, so that the bees can get near the queen in large numbers, and the cage hung with the clustered swarm for half an hour or so till they call her "mother," then this large swarm can be hived where we please, and the queen allowed to run in with the swarm; and, as a rule, all will go well; but as very few wish to hive two or more swarms together, and as their coming so it is possible to do this is not very frequent, did we so wish, this also is hardly practical. The chances are better where the swarm is hived in a new hive on the old stand, or allowed to return, where you have the old queen so you can control her on account of her having a clipped wing; but even then they will sometimes become so dissatisfied that they will hunt up the old hive, unless moved some distance from its old stand, and all or nearly all go back to it, or go into hives all about the yard, where in many cases they will be killed. If the above large cage is used, placing the cage over the frames before the swarm returns or is hived, and the queen allowed to remain in this cage for a day or two, the chances of success are much increased. On the whole I would not advise the changing of queens during the swarming season in any way or by any plan, for I find it to be much more annoying to try to change queens with colonies about to swarm, or with those which have lately swarmed, than with any others, or at any other time of the year; and, besides, a failure more often results.

COLOR IN BEES THE LEAST.

Question.—Did you read what the editor of GLEANINGS said on page 393 about the color of bees? If you did not, please do so now and then turn to "Bees, Queens, etc.," in their illustrated catalog and read how the Roots charge more for queens of a yellow color than they do for queens of darker hues, thus putting a premium on the yellow ones. Are they not putting color to the front in this way as much as any one? How do you reconcile this with E. R. R.'s statement that he would not give color even a favorable position? If the darker bees are the best, why not charge more for them and thus build up the best bee in the world, while S. E. Miller's owl shouts, "Who-who-who-are you?"

Answer.—It is probable that the friends Root understand what they are about, hence I shall not try to reconcile the apparent discrepancy which the questioner points out—only saying that, perhaps, friend E. R. R. will enlighten us on this matter. While on this matter of color I wish to say that this very item gives the main "handle" we have in the improvement of any stock. Mr. Miller asks, "Are the prize-winning Jersey cows the prettiest cattle?" To this I answer by asking, "Do the judges awarding the prizes select the prize-winning Durham-cattle color to award the Jersey premiums on?" All

are cattle, and it is the *color* and make-up of the Jerseys which give them the name of Jersey cattle, and whatever there is good in them. So all are bees, and it is the *color* and make-up of the *golden* bees which give them all the good qualities there is in them, and by this color I have been enabled to select a bee which has given me a greater profit than any other. If others wish to select any other bees by their color, they are at perfect liberty to do so; and I see no need of insinuating hard things against any bee-keeper who selects bees by the color *black* because he thinks they are the most profitable.

[Why, friend D., it seems to me your questioner does not take in all I have said. Evidently, the writer of said question is a little nettled over my position toward the yellow-banders, and, like all opponents, fails to give all of what the other side said. Now turn to our catalog, page 29, and read: "While we do not regard them [that is, yellow untested queens] as any better for real business, there are some who go in for beauty." And, again, under the paragraph headed "Select Tested," after describing the progeny as large and yellow, this sentence occurs: "The progeny of these queens, for real business, will probably be no better than those from the ordinary tested." This answers the whole question, it seems to me; and the mere fact that we charge more for them is no evidence that they are better, in the face of such statements concerning yellow-banders, as above given. There is nothing to reconcile at all. The very fact that we charge less for the leather stock, and more for the yellow, would induce most people to purchase in the interest of their pocketbook when it is distinctly stated that the cheaper queens are just as good. Another thing, we had to charge more for the yellow stock, because there was such an insane rage for the yellow at the time the catalog was written that we would have had no sale for the leather-colored stock.—Ed.]



WAS LANGSTROTH THE INVENTOR OF THE MOVABLE-FRAME HIVE?

Mr. Root:—I send you this. Perhaps it may be old to you, but I send it for what it may be worth.

A. D. P. YOUNG.

Ashtabula, O.

The popular notion that Langstroth was the inventor of movable frames for bee-hives is an error. Such frames were known in Germany 30 years before 1852, the date of Langstroth's first patent. In 1843 Baron von Berlepsch made use of movable frames, and he refers the idea to a man named Prokopovitsk, who employed it in 1841. Evidence to prove this statement is obtainable at the Patent Office in Washington. Furthermore, in a book published in London in 1841, entitled the *Natural History of the Honey-bee*, on page 300 may be found a description of comb-frames hinged like the leaves of a book. By the way, the notion held by bee-farmers, that the dovetailed method of constructing hives has been patented, and must not be imitated, is a

mistake. It has never been patented, and is a common right. Anybody may manufacture such hives.

[Strictly speaking, Langstroth was not the inventor of movable frames; but he was the inventor of the first *practical movable frame—something that was of use to the world*. The leaf hive of Huber, while the frames were, in a certain sense, movable, was not a practical hive, and one would about as soon have regular box hives without movable frames. There is a certain person who seems determined that Langstroth shall have no credit for the great strides he made in bee-keeping, and that person is C. J. Robinson, who was cotemporary with Langstroth when he was doing his best work. I do not know whether the clipping above given came from C. J. R. or not, but it is all of a stripe; but I do know that Mr. Robinson appears to be jealous of Mr. Langstroth. Such kind of writing at this time is in keeping with the claims of those who say Columbus did not discover America simply because he found men here when he landed, so the natives must have been ahead of him. He was the first man who discovered it in such a manner as to make it of use to the rest of the world, and in a way that seems just now to be durable—something the Icelanders did not do, although they touched our shores just as Huber did movable frames. Far be it from me to detract from Huber. He is already covered with glory; but if he were living he would want none of the just credit belonging to the father of American bee-keeping.—Ed.]

DOUBLE-STORY LANGSTROTH HIVES.

I read in GLEANINGS, May 1, a report by friend Nash and Mr. N. E. Doane about 10 and 16 frame hives with large colonies of bees producing large quantities of honey. I should like to say a few words also, which I know will please you. I started in April, last year, when I ordered that Cowan extractor from you, with only three hives; that is, to put two more stories on top of those hives as an experiment, so as to test the quantity of honey that those three colonies would gather. What was the result? They filled 16 frames in ten days, with nice clover honey. Well, when that extractor arrived on Saturday evening, that next day I gave it a trial. It worked like a charm. I extracted between four and five gallons of honey from one hive which had a half-story on; but those three hives where I put those two one-story hives on top gave me eight or nine gallons apiece inside of two weeks. Yes, I side in with friend Nash and friend Doane. This year I tried it again, and I received my reward from those same hives as last season. I shall hereafter run all my hives on that scale. It is paying. There is nothing like it that I have found. Of course, we must keep our colonies strong—that is, they must have a good laying queen. I have mostly hybrid bees. It is very hard to get queens mated with Italian drones, on account of so many parties having a few hives for their own use. Then another obstacle is, the woods are so close to our doors; but nevertheless my bees give good results in gathering honey.

GEORGE SCHAFER.

New Orleans, La., June 1.

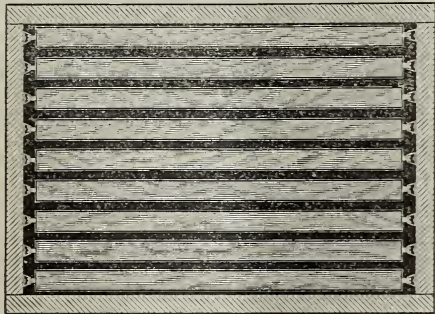


THE RIGHT AND WRONG KIND OF FRAME-SPACERS.

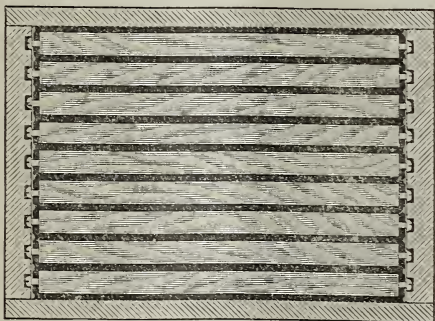
THE WANDER SELF-SPACING FRAME HIVE.

By Eugene A. Wander.

The body of the hive can be the same as any in use. The hives with which I experimented are of the Quinby, Langstroth, and Gallup types, with the addition of slideways, which are affixed at opposite sides. The frames may



also be those used in other hives with the addition of pins or screws driven or screwed in at their respective places in end-bars; viz., two in each end-bar about one inch from the end. The slideways are so adjusted that they slide smoothly and easily. Closed frames with comb can easily be planed off on sides, and used. I prefer the slideways made by cutting parallel mortises in inside of ends of hive-body, and fastening flat strips of tin to the ridge remaining, as will be seen below.



It is the most perfect and easy hive to manipulate that I know of, being able to do almost every possible thing with it with ease, such as moving or shipping without loss of time in preparation, and possibility of fixtures getting loose and killing the bees; also perfect spacing through the center, top, and bottom, and at sides of frames; reversing frames or hives; ease in withdrawing or inserting frames without destroying bees or danger of killing the queen;

the frames do not have to be pried loose in taking out, and most other features which will readily be recognized upon examination. Every thing is interchangeable. The little extra in cost of making the hive is soon balanced by profit, to say nothing of the pleasure of handling it.

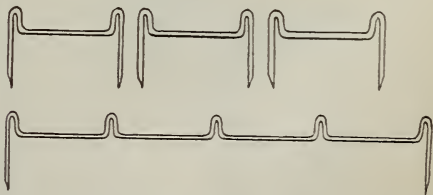
EUGENE A. WANDER.

Hartford, Conn., May 18.

[Perhaps I ought to say that spacing-devices that are part and parcel of the hive, and not of the frames themselves, have not proven to be very popular among bee-keepers. I have no doubt that friend Wander can remove the frames; but he by his plan loses some very important advantages. For instance, suppose he wants to examine the brood-nest. He desires to take out an outside frame, we will say, full of honey. In order to put in the center of said brood-nest an empty comb, and yet keep all the rest of the combs in their same relative position, he must remove at least half of the frames, then put each one back in a notch or trough next to the position it formerly occupied, in order to give frame-space in the center of the hive. Suppose, now, the spacers were a part of the brood-frames themselves. We simply remove the outside frame containing honey, and shove the whole four or five frames, as the case may be, over *en masse* at one operation, and in less time than friend Wander can remove a single frame. There is now space on the center of the brood-nest to insert an empty comb for eggs. I have mentioned only one disadvantage; but there are others, though it is hardly worth while to give them, and I know of no advantage that this plan has over spacing-devices attached to the frames themselves. In saying this I do not wish to throw cold water on Mr. Wander's invention, but it is a duty I owe to the younger generation of bee-keepers to inform them *why* such self-spacing arrangements have not proven to be popular.

And here is another one that employs the same principle—or, rather, the spacing-arrangement is in the rabbeted part of the hive:

I have thought of a self-spacing device I will use—a staple made of copper wire, $\frac{1}{8}$ inch thick, and driven into the rabbets of the front and rear end-boards of the hive, and made as shown at the top. The staple will support



the frame, and do the spacing, while keeping the bees from sticking the frames fast to the boards. The wire being $\frac{1}{8}$, the bends will just make the quarter-inch space, and will be better than tins, nails, or tacks, not causing so much moisture as tins, and better for winter.

I had thought of making the support of one piece of $\frac{1}{8}$ wire, as shown in the bottom.

Cuba, Kan., May 22. WM. H. EAGERTY.

This is open to the same objection as the one previously described—namely, the impracticability

bility of shoving a certain portion of the brood-nest from one side or the other of the hive, or of picking up three or four more frames at a time. When the spacers are on the frames, the frames may be picked up, and the fingers grip hold of the outside edges of the outside frames, so there is no danger that the intermediate frame or frames will knock together, because the spacers hold them apart just as when in the hive.

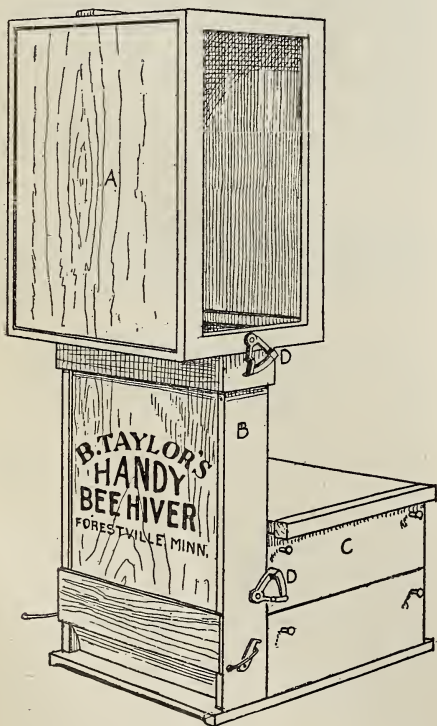
Friend Eagerty's spacers, if, instead of being put in the rabbets, were put in the frames themselves, along the top-bars or end-bars, would make very good spacers—that is, as shown at the top of the engraving. When I first looked it over I thought that was his idea, and I wrote him I thought it was very good; but I have since observed he would make them a *part of the hive*, and here is where he would make his mistake, as I have already pointed out. Friend Eagerty's plan of staples, especially the second one, is quite old, and has been, I think, illustrated and described in our columns before.—Ed.]

ANOTHER HIVER

"NO PROFIT IN ALL THESE TRAPS TO A HONEY-PRODUCER;" INVENTIONS AND THEIR INVENTORS.

By B. Taylor.

Mr. Root:—On page 402, May 15th, you give a cut of Mr. Alley's latest swarm-catcher. I send you to-day a photo to show that I have been all over this field. The picture was taken four



years ago. The idea is the same as Alley's, except that my device as illustrated has no zinc for the bees to work through. The entrance to

the hive is not interfered with in any way; but when a swarm begins to rush out, the entrance is closed by their force, and the whole swarm is caught with the queen. I tried the zinc and cones, but this is much better. I lay no claim to this idea. I believe this device will work as well as any that can be made; but if any person ever makes one that is practical—that is, profitable to honey-producers—I give notice I will not claim priority, for I have abandoned all hope of making any of these traps profitable. Friend Root, I am almost ashamed to send you this, for it begins to look as though I were going to claim every thing that inventors bring out. The fact is, I have dreamed out and tried a vast range of ideas on apiarian subjects; have tried them until I have come to the conclusion that there is no profit in all these traps to a honey-producer. I believe that the inventors and patentees and makers of these things are the only ones who are likely to get any profit; and the outlook for them is not good enough to tempt me to further effort. I abandon the field to others, and will give any one who makes one of these self-hiving inventions practically useful a handsome sum for the right to use it.

In the articles I am now writing for the *Beekeepers' Review* I am giving my sincerest convictions in regard to each question discussed. This may look like throwing cold water on inventors; but it is not, for I regard mechanical inventors as the greatest and most useful of the human race. I was talking with a very bright teacher lately, and made the above claim. He disputed, and claimed that a teacher standing before a class of boys and girls, and directing their developing minds, as the grandest human character; but I said, "Mr. K., I fear that, without the aid of mechanical inventors, you and your class would cut a sorry figure—no shirt nor pants, no hat nor shoes, and your scholars in the same fix; no schoolhouse, no books, not even a birch gad to wallop the unruly with; for the moment you break off a sprout and strip it you begin an invention." Reader, stop and reflect in what kind of state the human family would be but for mechanical inventors; and see if you are not forced to agree that they are the greatest and most useful of human beings.

Forestville, Minn.

[B. Taylor is more frank than most of us would be. An inventor, when he gets up something, and has it patented, whether it is practical and valuable or not, is pretty apt to feel that it is the best thing of the kind. In fact, he feels toward it as a fond father does toward a babe. But it is the every-day life that demonstrates the value of these inventions. I know it is true a lot of useless traps are annually poured upon the public; but that public, fortunately, does not very often adopt a thing unless there is use in it.

While your handy bee-hiver, friend T., is not practicable, it represents an idea from which further ideas may develop.

I should hate to discuss that question—which

is the greater benefactor, the schoolteacher or the inventor? It would be like the old discussion in our school-days, that could be argued *ad infinitum*—the beauties of spring versus those of fall.—ED.]

THOSE NON-SWARMING AND NON-STINGING BEES.

By Henry Alley.

Friend Root:—You wish to know about the non-swarming and non-stinging bees. I have this to say of them: In May, 1894, I formed a six-frame nucleus for the purpose of preserving some fine drones to be used in an out-apiary two miles from home. Of course, the colony was queenless, or the drones might have been destroyed. In July the drones had nearly all disappeared from this hive; but in the meantime a queen had been reared, and the young bees were hatching out, and it seemed that they were more than commonly beautiful, and of a leather color. The colony was taken home, more combs added, and in a few weeks it was one of the most powerful hives of bees in my yard. This colony was used to rear cells in an upper story the rest of the season; and before the season closed they had built 250 queen-cells of the finest quality; that is, the queens from these cells were extra fine. You want to know, too, whether the bees are stingless. Well, I am hardly able to reply. I can say that not even one bee of this particular hive has ever used its sting on me; nevertheless, I presume these bees have stings, yet they do not seem to know how to use them. I have opened this hive not less than fifty times, but never knew a bee to take wing or to sting during any operation. Practically this is a strain of non-stinging bees.

Now about the non-swarming part. I have had this strain of bees in my apiary six years, and have never had a swarm of bees from them; and, what is more, I have never heard of any one ever having a swarm from that strain. It strikes me that I can safely claim that they are non-swarmers.

About the colony spoken of, I will say that they are very industrious and active, and wintered finely. They are now the strongest colony in my apiary, and have drones in abundance. I propose to use the drones of this hive for my young queens that will be reared from other fine queens of the same strain now in my apiary. The bees are leather-colored, very industrious, hardy, and gentle. I believe in propagating a race of bees of this kind. Don't you?

Wenham, Mass.

HENRY ALLEY.

[Where any thing is advertised out of the ordinary we generally require an explanation. In our last issue Mr. Alley advertised non-swarming and non-stinging bees. I wrote him, asking him whether he had bees that *could* not sting, or bees that, under ordinary circumstances, *would* not, although having the power to do so if necessary, and the above is his explanation.—ED.]

SHALLOW BROOD-CHAMBERS.

MR. HEDDON REPLIES TO THE EDITORIAL ON P. 409.

Bro. Root:—I am quite surprised at the import of your editorial on page 409. Either you have not yet got the hang of handling my hive (and you must use more than one to ever get it) or I have no knowledge, either practical or theoretical, of handling the old styles, or you never could come to the conclusion that you could compete with a divisible brood-chamber in rapidly determining the true condition of the colonies. I think it would be very difficult to convince those who have tested my hives that any style of single brood-chamber or deep brood-chamber can for a moment compete. You had to open your hive at the top, pull out a division-board, and then pry along one half of your frames with that wire nail before you could determine any thing, hardly, beyond what might be determined from the outside without opening the hive at all. This gave plenty of time for robbers to get into your hive, if any were about, as is usually the case at such times. With the divisible brood-chamber I do not remove the cover at all, but split it in two in the middle, turn up the upper half, and look into both halves at once, or as nearly at once as possible for one not cross-eyed, and put back the little case before a robber could get a taste. My opinion is, that I can handle hives for this purpose somewhere about six or ten to your one.

Yes, you were correct regarding the reason I made the top and bottom bars to my frames only $\frac{1}{2}$ wide, which is just the width that a brood-comb is thick. Now, you find that, between the shallow brood-cases, the bees will put in brace-combs. Certainly they will; but all they put in amounts to more of a bugbear than a real detriment. These brace-combs have some little advantages, and the annoyance is very slight. Those who have learned the great advantages of the use of a divisible brood-chamber look upon these brace-combs as of no moment. I trust that bee-keepers who have not used the hive will remember that, where an opening is made between sets of frames so near the bottom of a brooding-apartment, much fewer brace-combs are built therein.

What you state concerning the space in the middle of the brood-nest retarding the production of brood is, in my opinion, a groundless theory from first to last, wholly in opposition to practical results. It's a part and parcel of the same theory that hives should be square or tall, in order that the brood-nest may be spherical in form. The Bingham eight-frame hive, containing frames holding combs $4\frac{1}{2}$ inches deep and 22 inches long, will show as much brood, and I believe more, than any other style of hive. We have been terribly handicapped in adapting hives to the bee-master, because of false theories regarding adaptability to the bees.

I hardly know why you mention the matter of burr combs between the top of the brood-chamber and bottom of the surplus-receptacles. I can not see that this is a fit subject, when comparing different hives, for they are all subject to the same laws and conditions; whether the brood-chamber is divisible or not makes no difference. At the top of the brood-chamber, where we place our surplus-cases, with all hives, is where brace-combs are much more liable to be built, and here I always use and for ever advocate the break-joint honey-board. Those who oppose it now will use it later. I assert this from twenty-eight years' experience in bee-keeping, and more than twenty years' use of thick and deep top-bars.

Will you allow me to thank Mr. Richardson for his truthful statement concerning the merits of a divisible brood-chamber, etc., as found in my hive, presented to your readers on page 450? I must confess I can not agree with my friend and collaborer on the point he touches, concerning my being derelict in my duty, in not better advertising the hive. Surely many bee-keepers naturally would, and have discovered its merits. To a certain extent they have published these merits to the world, and would have done so, and so would I, to a much greater extent, had it not been that we were refused space in the journals. I think I have done pretty well in my book, "Success in Bee Culture;" and now in my pamphlet, just issued, I think the job is completed. I can not understand Bro. Richardson's allusion to the matter of others inventing what I did, perhaps, had I not patented my invention, or had I better explained the same. One who can not

fully understand the merits and working of the hive, from the explanations I have made, and immediately after the patent was issued, certainly never could alone have discovered its merits. If I am to blame for not giving it wider advertising, at an earlier date, what shall we say of those who now claim to have discovered and used some of its meritorious features, and yet never published a word to the world concerning them? There is only one thing we can say, and perhaps that had better not be said.

JAMES HEDDON.

Dowagiac, Mich., June 7.

[As I have not yet had reason to change my views as expressed in the editorial under consideration, I will let Mr. Heddon's reply stand on its own merits, without further comment.—Ed.]



It is said there are exceptions to all rules. We usually say that a swarm never comes forth unless they have something that they regard as a queen, either young or old. We had the exception this morning that proves the rule. Of course, they went back.

SOME of our apicultural writers are having a little sport over the way in which the editor of the *Cosmopolitan* "put a head" on W. Z. Hutchinson's articles, designating the bee as masculine. Well, we can quite excuse his ignorance in view of the splendid way in which the magazine sets forth W. Z. H.'s beautiful photos.

WE tried a swarm-catcher last week—not the automatic device, but a large cage with a wide mouth to clap over the entrance as the bees rush out. Perhaps we were too late in getting it applied; but it didn't work as we thought it ought to. One swallow doesn't make a summer; but I suspect bees do not feel really satisfied unless they have had a big "pow wow" in the air.

BASSWOODS are blooming beautifully; and the frequent and warm rains that we are now having give promise of an abundant honey flow from that source. Letters go to show that white clover has been largely a failure almost everywhere. If any one has secured a fine crop of white-clover honey, let him hold up his hand. There is going to be a crop of honey in California; but, as Rambler says elsewhere, it will not be such a very large one after all.

IT comes to us in a sort of roundabout way that there are some bee-keepers in Canada who are producing sugar honey—that is, a so-called honey produced by feeding sugar to the bees. There is little or none of that thing going on in this country, I believe, and I really hope there never will be. In Canada, some of the prominent bee-keepers are taking vigorous measures to keep such honey out of the market, and I hope they will, for I can not believe that the

average dealer here or in Canada will sell it just what it is, for then it would not sell at a

NEW VS. OLD METHODS OF RAISING CELLS.

WE have something over 250 queen-rearing colonies in our home yard. After having tried very faithfully all the later methods, such as artificial cell-cups, raising cells in the upper story of a strong colony having a queen in the lower story separated by a perforated zinc, and all such new methods, we have gone back to the good old ways. The artificial cell-cups are too expensive to make—at least, for us; too expensive to put in royal jelly and larvæ; and then, worse than all, we find that too large a percentage of them are rejected. Completing the cells in the upper story of a strong colony with a queen below, works *sometimes*, and sometimes not. The uncertainty of the plan has caused us to abandon it for a good strong colony of *queenless* bees. We save all our cell-cups, and cells from first-class breeders, and put the frame or frames containing them into the queenless colony or colonies on hand for that purpose. There is thus a certainty of results; and where we are selling as many queens as we are now, we always have quite a number of partially completed cells from choice breeders that have been sold out a few days previously. By this plan our cells really cost us nothing, any more than the time of taking out the frames with the cells thereon, and putting them into one or two special queenless colonies, by them to be completed.

WIDE AND NARROW TOP-BARS IN SECTIONAL OR DOUBLE-BROOD-NEST HIVES, AND THEIR EFFECT UPON BROODING-SPACE.

THE double-brood-chamber Danzenbaker hive still seems unfavorable for the rearing of a full amount of brood. We find that a queen will fill clear full one section of the brood-nest before she will go into the other. I feel more convinced than ever that wide top-bars for double brood-nests or sectional brood-nests are not the thing.

A year or so ago the bees all died in our Heddon hive, and combs got wormy. This spring we got out the comb, put in frames of foundation, and hived a swarm on them. The top-bars of these frames are $\frac{3}{4}$ x $\frac{1}{4}$. The queen and bees seem to be working fairly well in both stories at this writing, although I can see there is a *tendency* on the part of the queen to accept one section rather than both at the same time. I can not but feel that the slightest barrier through the center of the brood-nest is somewhat of an obstruction, and a waste of brood-space. The narrower this barrier or top-bar, the less the obstruction. But wide top-bars, or wide and deep either, for that matter, do not seem to hinder the *bees*. In fact, they may be considered an advantage in that they keep the

seen below, and allow the bees to put surplus where we want it.

BEEES AND FRUIT.

AN interesting paper on raising fruit was read recently before the Ravenna Grange by Mr. Smith Sanford. After stating the conditions necessary for that business, and the enemies and drawbacks to contend with, the matter of the influence of bees on fruit came up. Mr. Sapp gave the following strong testimonial as to the value of bees to the fruit-grower:

Mr. Sapp referred to the part that bees take in successful orcharding. He referred to orchards which had produced abundant crops of fruit when a number of colonies of bees had been kept near the orchards, that had partially or completely failed after the removal of the bees.

As the above comes from outside of our own ranks, it is of special interest. We are indebted to the *Ohio Farmer* for the clipping.

THE APICULTURAL EXPERIMENTS, AS REPORTED IN THE REVIEW.

I AM always glad to read the articles in the *Review*, by R. L. Taylor, detailing his experiments at the apicultural station, providing I can study out the conclusion. But several times I have found myself almost unable to gather the lessons taught by the tables. I suppose it is my own thick-headedness, but I have heard others speak of it several times. If our friend R. L. T. would help us to translate them a little more it would add greatly to the value of the report. I was about giving an editorial summary of the one in the *Review* of June 10. I may be thick-headed; but for the life of me I could not boil it down. I kept still, however, and said to my co-worker, our proof-reader and stenographer, in my usual tone, "I wish you would make an editorial summary of this." I have sometimes asked him to do this before, when I have been pressed for time. The next day I came around and said, "Well, have you got that summary?"

"No," said he, "that is a sticker."

"Have you read it?" said I.

"Yes, especially the reading-matter; and while there are many interesting and valuable facts all through the article, I can not bring them all to a focus so as to state the result of the problem as a whole."

I know my friend Mr. Taylor will not take it unkindly when I say I am not fault-finding; but I make it as a criticism, hoping that it will enable some of us to understand the tables a little better. He sometimes gives us a summary, or the gist of the matter in a nutshell, and thus unquestionably throws much light on the tables, making their meaning more intelligible. Perhaps I ought to be able to do this; but surely Mr. Taylor can interpret his own figures more correctly.

I am willing to acknowledge that I have my fair share of thick-headedness; but some of the brightest bee-keepers I know of acknowledge that they have been greatly indebted to GLEANINGS for the editorial summaries of the Michigan apicultural reports, as they were not able to understand the original report in the *Review*. I should like to give the names of some of these bee-keepers; but for fear they would not like the mild insinuation that they are thick-headed, like myself, I forbear.

The point is right here: There are very few readers who will take the time to study out a set of figures, or read a thing through several times to get its meaning. If they do not catch the meaning at first glance they will simply skip it.

FOUL BROOD; HOW TO GET RID OF IT AMONG NEIGHBORS; THE POLICY AT THE HOME OF THE HONEY-BEES.

WE recently got track of a bad case of foul brood in our own county. Some time ago I took a bicycle-trip down to investigate. Sure enough, it was a rotten case, and needed complete extermination. As it was only about seven miles from us, I offered to furnish the party foundation, frames, and hives, if need be, all new and complete, free of charge, on condition that he would burn frames, hive, and all, but save the bees if he liked, by driving them on to frames of clean foundation. We feel that we can not afford to have that dread disease within even seven miles of us.

I think it greatly behooves all intelligent and progressive bee-keepers, when they know of cases of foul brood, to offer, if need be, the owner of the infested stock their services, and furnish them foundation, frames, and a new hive. Our apiary is perfectly healthy, and we have little to fear of the disease making any serious inroads on us again, because we feel that we are able to nip it in the bud. But notwithstanding this, we take every precaution, and therefore sell nothing but queens by mail. The business of selling nuclei or bees by the pound was discontinued over a year ago. The mere fact that foul brood broke out in our own apiary some years ago, and reappeared in another yard some five miles south of us two years ago, and again within a few days past in an apiary seven miles north of us, leads us to believe our policy is wise. But we feel perfect safety in selling queens, because we never knew of a case where a queen carried foul brood from one colony to another. A very few such cases have been reported; but there are so many other ways in which it could have been carried, I have been inclined to doubt them all. In fact, as our older readers have known, when we had foul brood we carried queens from diseased colonies and introduced them into perfectly healthy ones. The experiment was repeated a good many times, but foul brood never appeared where the queen was put.



FLORIDA TRAVELS.

There are a good many surprises in Florida. You get a little homesick, and every thing looks dull and dreary; the towns look dilapidated and run down, and the landscape looks like a barren desert. But all of a sudden you come across some example of luxuriance and productiveness, like the grape-fruit tree near friend Stacey's house. By the way, I want to say a word more in regard to this grape-fruit tree. In mentioning the matter, several friends assured me that, especially in Florida, the trees around most houses grow with remarkable vigor, and no theory has yet seemed to explain the matter fully. Some suggest that the shade of the house conserves fertility; others, that the waste and trash from the average family makes the ground rich; and one friend, whom I shall mention further on, goes so far as to gather all the trees, trash, rubbish, and almost every thing he can lay his hands on, to mulch the ground around his orange-trees. He claims that mulching and shading are elements of fertility.

Well, there are other surprises that meet you in Florida, especially after you have begun to think the little towns and villages do not amount to very much—and some of the villages and railroad stations are, in fact, not much more than a store and postoffice; but now and then you see something that upsets the idea that there is nothing "going on" in Florida. A startling surprise awaited me when I set foot in the city of Tampa. The total population of the place, I am told, is about 18,000. There are beautiful paved streets, fine buildings, a street-car line that runs to Ybor City (pronounced Eebor); and, most astonishing of all, is to find away out there in the wilderness and sandy wastes the Tampa Bay Hotel. The hotel—well, look at the picture on the opposite page, and then believe me when I tell you it lacks only a few feet of being a quarter of a mile long. These great hotels in Florida are, in some respects, a sort of manufactory. They manufacture right on the premises, by means of steam and electricity, and skilled artisans, every thing to make a traveler comfortable. The nicest water is hunted up, even if they have to go many miles for it, and a great engine sends it where it is wanted. The same engine furnishes power for driving fans, lifting elevators, and helping about the kitchen wherever power will help. The kitchen is a sort of manufactory where the best eatables are made in quantities sufficient to supply a considerable town. I have forgotten how many guests this hotel accommodates, but it is something like a thousand; and at the time I was there I was told the rooms were all occupied. The picture gives you some idea of the grounds and surroundings, and of the beautiful drives and walks, made of Florida shells, which I have already described; also the trees and tropical plants and shrubbery. In the foreground you have a view of a beautiful iron bridge that leads to the hotel. Various greenhouses and conservatories furnish every thing to make all the rare and tropical exotic plants feel at home that are to be found anywhere on the face of the earth. The architecture is, I believe, what is called Moorish. The building is all of brick, and this was a great relief to me, because, you remember, I had been somewhat disgusted with the make-believe imitations of stone, made out of sheet-iron and paint. There is not any

whitewash to drop off nor show through on the Tampa Bay Hotel. Some of you may be inquisitive as to what should make such a thriving live city as Tampa, away down in that part of Florida. Well, I was just thinking I should much rather say nothing about the principal business of the city and vicinity; for, to tell the truth, Tampa is said to be almost headquarters for the whole world in the manufacture of cigars. I did not visit any of these factories, although I was invited to do so. When I am an invited guest, and my friends take pains to show me around, I usually feel bound to be pleased and to look happy, learning about things that I never knew of before; but if I should look pleased and happy while being shown over a great manufactory that confines its operations to cigars and tobacco, I am afraid I should not sleep well when it came night time.

Out a little beyond Ybor City I found some beautiful gardens carried on by a system of irrigation, quite extensive, and fully up to the times. Ybor is the name of the most wealthy man in Tampa, and he was greatly instrumental in building it up. He is a Spaniard, and has extensive tobacco-plantations in the island of Cuba. For some reason, unknown to me, the locality of Tampa City seems to be better for his line of business than Cuba.

While I was looking over the big hotel I was greatly surprised to see a strange race of people, unlike any thing I had ever seen before. As the train pulled up, a lot of nicely dressed pages, or waiters, came to take charge of the trainload of visitors. These waiters were mostly young boys, say in their teens. Their style of dress was foreign, perhaps somewhat after the oriental style; and some of these young fellows were sufficiently good-looking (notwithstanding their swarthy skin) to make many of the girls envious. They spoke some foreign tongue that I took to be Spanish. Let me say to their credit I found them to be exceedingly courteous and obliging whenever I asked any questions of any sort.

At Lakeland I found W. C. Green, who had given me a very warm invitation to come and see him. Friend Green is a genius, and an odd genius. His hives are arranged in groups in his dooryard. Some of the hives are very tastily located in an ornamental summer-house. Almost as soon as I came into the dooryard he commenced to show me his beautifully marked Italians. He began opening one of his hives, with so little ceremony that I dodged back; and he laughed at me some to think that A. I. Root should be afraid of bees. I told him I was not a bit afraid to open any hive in his yard, and that without smoke or veil; but if he was going to yank off covers in the way he had just commenced, I thought I would keep at a safe distance. He said his bees were properly trained, and would not sting, even if one did burst into their domains without so much as even a gentle rap to let them know you are coming. Well, the bees came out and filled the air. They buzzed around his ears, and I felt almost sure he would get stung most severely; but he did not get a sting. The next day, however, he attempted to do the same thing with a log gum that we found away out in the woods in a neighbor's yard, and both he and the owner got stung until they were quite ready to beat a retreat. Friend G. has a pretty home, and quite a family of boys and girls.

In the afternoon we started out on an exploring expedition. Mr. H. S. Galloway has nine acres of strawberries. His variety, which he calls the Newnan, is a perfect-blossoming kind. I found his strawberry-ranch on ground so low and wet that water stood in the furrows over a



HOTEL AT TAMPA BAY, FLORIDA.

great part of the patch. I commenced at once recommending him to put in tiles, and get rid of all the water. Friend Green told me I might know all about strawberry-raising in Ohio, but that I did not understand it in Florida. Of course, the frost had played mischief with the early crop. Strawberries are planted here in double rows, about three feet apart. These double rows have the plants a foot from each other in every direction, and they are permitted to bear but one crop. After they are done fruiting they are allowed to put out runners enough to make a new plantation in the fall. The fall-set plants bear the crop in February and March. We got over on a protected side of the woods where the tall timber had kept off the frost; and I was delighted to find here and there ripe strawberries in the month of February. Somebody has said (I do not know who) that the strawberries of Florida lack the fine flavor of those grown away up north, where we have zero weather, and snow as high as the fences; but when I got a taste of a fairly ripened berry I declared at once it was the most delicious strawberry or fruit of any kind I ever tasted in my life. After I had sampled quite a number it occurred to me they might be more valuable than I knew; so I remarked:

"By the way, friend Galloway, you say you have already marketed a few. What price do you get for them at this season of the year, if I may inquire?"

"Oh! I have an offer of \$1.50 a quart for some I expect to get off perhaps to-morrow."

"Dollar and a half a quart!" repeated I, as I took a great luscious berry away from my mouth, where it was *almost* safely lodged. "Now, look here, my good friend," I continued, "perhaps I owe you an apology for helping myself so freely. I do not think I want very many, even if they are so delicious, if *that* is what you are getting for them."

"Oh! help yourself—help yourself, Mr. Root. When I told you the price I am offered I did not think a word about those you have been eating. And, by the way, this price is a little extra on account of the freezes. I think it is about the best figure I was ever offered."

A few weeks afterward, while I was in Jacksonville, I found out how they managed to be able to pay such a price. Little carts were up on the sidewalk, advertising ice-cream with real strawberries; and the strawberries were right close to the notice, to let people see they were *genuine*. The dishes of cream were furnished at the usual price; but they managed to make one quart of strawberries make a *good many* dishes. When I asked friend Galloway about manuring his ground he replied that he had settled down on Bowker's strawberry fertilizer, applied to his ground at the rate of 500 lbs. per acre.

The next neighbor we called on was a bee-keeper; and as he is right on the shores of one of the beautiful lakes, he does quite a little in the way of catching fish. Oh! I did not tell you that Lakeland is *surrounded* by beautiful lakes. Friend Cochran (where we were visiting) had a contract to supply six dozen speckled perch at a certain hour in the afternoon. I suggested to friend Green that it was not fair to hinder a man when he was trying to fill an order, and that he and I should get into the boat and help him by catching fish too. Well, I did help. I caught *two* beautiful perch while friend Cochran caught *twenty-six*. I had a hook and line and pole just like his own; and I dropped my hook into the water just as he did, and yet he was catching fish all the time and I was not. Is there a trade or skill in just dropping a baited hook into the water and then watching for the cork to bob up and down?

Indeed there is. The old veteran fisherman could tell at a glance about where the perch would be likely to be hidden near certain water-plants. Then he knew how to drop the line without making a great splatter and racket. Furthermore, he kept his line moving, just about enough to coax the fish without frightening them away. Now, friend C. is an expert in his own line of work; and I am sure friend Green can testify with me that his good wife is *also* an expert in her line of work; and that line consisted in getting us a grand good dinner, mainly from the fish we had just caught in the lake. By the way, what do you suppose these speckled perch that are caught by the hundred, sometimes, in a single afternoon, bring in the markets down in Florida? Why, only *three cents* each. They do not sell fish by the pound down there. They are like eggs—so much a dozen.

Now I shall catch it again for what I am going to tell; that is, some of the friends who think I am inducing people to move down to Florida just to be disappointed, may be will grumble some more. The story is this: Not very far from friend Galloway's strawberry-ranch a piece of ground was lately sold for \$1.25 per acre. Friend Green, with whom I was visiting, was the lucky purchaser. It was right adjoining the railroad, besides, about seven or eight miles from Lakeland, and a steam-sawmill was located right there, cutting up lumber at the time of the purchase. After friend Green had bought the tract of land, he took the proprietor of the sawmill over on it and sold trees enough from the tract to more than pay the purchase money. The mill-man paid so much apiece for the trees just where they stood in the woods, so friend Green had no expense whatever to stand in the matter. A nice large straight pine-tree brought—how much do you suppose? Only 20 cts.; and some of them that were not quite so nice sold for two for a quarter. Well, 7 trees on an acre, at 20 cts. apiece, paid for the land. Then the railroad company offered to make a flag-station right there by the sawmill if friend Green would put up a little building, and the building was already up. I asked friend Galloway before I left what he considered his best strawberry ground worth per acre. He said it was not for sale, but finally decided he would not want to part with it for less than \$100 an acre; and the land that costs only \$1.25 is hardly a mile away; and I thought, from the looks of it, it might be exactly as good. You may ask why such chances are left "lying around loose." Well, one reason is that people are too lazy to go to work and build up a business as friend Galloway has. Another thing, there are a great many who do not seem to have the ability to make the wilderness blossom as the rose. Even if they were to undertake it they would have bad luck here and there, and perhaps everywhere. I should enjoy going into those Florida wilds and building up a home; and I am just conceited enough to think I could make things grow as those strawberries do, and as that grape-fruit tree does I was telling you about.

It was Saturday afternoon. I was getting so much behind with my appointments that I was obliged to push on. I had half an hour to wait for a train. I had read newspapers, and read over the bills stuck up over the walls of the depot, and felt a longing for something that would help me study my Sunday-school lesson for the morrow. I went over to the drugstore and asked them if they had any periodical to sell that would answer my purpose. Although they kept a sort of news depot, the proprietor told me they never had any calls for any thing in that line. When I looked disappointed he

said he had a copy of the *Sunday-school Times* that he used himself that I might have if it would be an accommodation. I had hardly had a glimpse of my old home paper during the whole time I was in Florida; and I tell you I just felt happy as I sat down and went over the pages so familiar to my eye. It was meeting an old friend away off in the desert wilds, and it cured me of being homesick, straightway.

OUR HOMES.

And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually. —GEN. 6:5.

On the evening of Wednesday, June 5, it was my good fortune to be present at the address of Anthony Comstock, given at the State Sunday-school Convention in Cleveland. Probably every reader of GLEANINGS knows something of the work of Anthony Comstock. For a period of almost 25 years his name has been almost a household word when the subject of social purity and the morals of our children have been under discussion. Previous to Mr. Comstock's vigorous prosecution, vile and indecent books were passed about, and swapped back and forth, even by schoolboys; but for the past fifteen or twenty years I have hardly known of such a thing, unless it was to make mention of the apprehension and arrest of the man or boy who started it; and they almost always of late years get brought to justice by the time they have got well started. Now for the discourse:

The main part of the speaker's talk centered about the imagination. He said that even a child began, and that, too, at a very early age, to people its thoughts with images. In fact, he put it in something this way: There is in the heart of every human being a sort of picture-gallery—a little room, we might call it, the walls of which are adorned with pictures of some kind. If the parents, the teachers, the pastor, the Sunday-school teachers, and others, do not see to it that the apartment within the little heart of every child is hung with good, wholesome, and *pure* pictures, the prince of darkness will surely see to it that these little walls are adorned with pictures of some kind, and that very quickly; and these pictures, too, will be of a very impure and low description; and it is the character of these pictures that fixes the thoughts, the actions, and the life, of the coming human being. If the imagination is allowed to dwell on fancies of a vile character, the future life of the person soon becomes *vile*. The subject of the discourse, I believe, was, "Our Children and their Environments." My good friend, if you have no children of your own, you have brothers and sisters, or relatives—children whom you wish to grow up good and pure and useful. What are their environments? What are the pictures they see? Are they permitted to select their own pictures and their own reading, without any parent or guardian to direct them? I have often told you of the sad stories that I have heard during my visits at our county jail. A boy borrowed a highwayman's book. I believe it was the history of Jesse James. I do not know whether the book was put out with the intention of having it prove a warning to our boys or not; I only know that it fired this boy's imagination with a desire to be a Jesse James himself. He stole a horse, and I found him in jail; and he confessed to me it was a very hard matter indeed for him to get Jesse James out of his

mind and choose the straight and narrow path instead of the broad way that leads to destruction. Yes, after I had patiently and kindly talked the whole matter over with him, from beginning to end, and when he assented to reason and common sense, yet there was a longing for unlawful adventure that he could hardly root out of his mind and his *imagination*. Some of my readers may think this very strange; but I am inclined to think there are others (perhaps a large portion) who will, in their own hearts, recognize that that boy was not, after all, so very much worse than some older people.

We all know more or less about the imagination, and how much it has to do with our acts in life. I was almost startled to hear Mr. Comstock quote text after text from God's holy word, indicating how much the imagination has to do with these lives we are living. Let us look at one of the chosen texts. For instance, away back more than 5000 years ago, "every imagination of the thoughts of man's heart was only evil, and evil continually." Again, in that same book of Genesis, two chapters further on, we read: "For the imagination of man's heart is evil from his youth." Let us now go on to Deuteronomy, 31:21: "For I know their imagination which they go about, even now, before I have brought them into the land which I swear." Again, I. Chronicles, 28:9: "For the Lord searcheth all hearts, and understandeth all the *imaginings* of the thoughts." Again, in the next chapter, 18th verse, Solomon says in his prayer: "O Lord God of Abraham, Isaac, and of Israel, our fathers, keep this for ever in the *imagination* of the thoughts of the heart of thy people, and prepare their heart unto thee." In the latter you will notice the imagination may be a power for good instead of an element for evil. Again, Proverbs 6:18: "A heart that deviseth wicked *imaginings*; feet that be swift in running to mischief." Again, Jeremiah 3:17: "Neither shall they walk any more after the imagination of their evil heart." Again, Jeremiah 7:24: "They walked in the *imagination* of their evil heart, and went backward and not forward." Again, Jeremiah 18:12: "We will walk after our own devices, and we will every one do the *imagination* of his evil heart." The prophet had been pleading with them in regard to their wicked ways, and he tells how they reply. Perhaps they replied by actions rather than by words. They say, "We will walk after our own devices, and we will every one do the *imagination* of his evil heart." Surely Anthony Comstock has abundant reason, and reason coming from Bible quotations, to support him in his position, that the sin of mankind has its root in the imagination. He said it was often stated that intoxicating liquors are the crowning sin of the present day; but while he was fully aware of all the devastation and ruin that come from intemperance, it was his honest opinion that impurity in thought, and the sin of holding fast to evil *imaginings*, is a greater sin than all the intoxicants together that curse our land.* His talk took a wonderful hold upon me, because, perhaps, I have been more than usually imaginative all my life. When I was a child I would sit still and laugh at my day dreams, or build air-castles, as it might be termed. I have been laughed at because I myself laughed at my fancies—that is, I often laughed aloud at some occurrence that was *purely* imaginary. Now, that is not so sad a thing as it is to get into a fashion of allowing your *peace of mind* to be disturbed by simple fancy. It is not a week

*The *imagination* of an intemperate man is often more dangerous than any *outside* influences.

since I found myself getting into a troubled state of mind because of something that I *imagined* might be. I put it away again and again. I went to work at something that would take my thoughts to another subject. This answered for a while, but back it came again. I prayed that God would deliver me from the hideous thing; but it required constant prayer until the time came when I could ascertain whether my fancies were real, or whether it was *only fancy*. The event proved that it was *only fancy*. In this case I had been borrowing trouble—borrowing indeed. Mr. Comstock told us that, when vile pictures have once been placed in this little picture-gallery of the soul, it is not always an easy matter to get the picture down and put some other one in its place. The old one has a fashion of showing *through*; and if you look intently where it used to hang, the lineaments of the old picture have a fashion of coming out stronger and stronger, like developing a photograph. You can almost *resurrect* an old and dead picture if you look where it used to be, and *long* for its presence again. Nowadays we have a way of making pictures by simply pressing a button. Evil imaginations are ahead of the Kodak, and you do not have to "press the button" at all. You simply *think* the evil thought, and there is the picture, more vivid and real—yes, and a thousand times more pernicious—than the real thing itself. I am not quoting Comstock just now. I am thinking of some of my own experiences. Imagination not only makes new pictures, but clothes vice so as to make it look like virtue. Imagination, with Satan in the background, will make you think your worst enemy on earth is your best friend. Imagination, with Satan out of sight in the background, will take a very commonplace person, and he will make that person look to your distorted vision like a seraph. Your *imagination*, if not held by the reins of reason, may induce you to bow down in the dust, and *worship* a piece of humanity not only commonplace, but vile and deceitful. If you have not had any experience in this line you *may* have before you die; and remember your old friend A. I. Root warned you. You need not delude yourself by saying you are too *old*, and have too many gray hairs for any such youthful folly. Satan laughs at gray hairs, and well he may; for some of his veriest dupes are found among those who are surely "*old enough*" to know better.

It is a little strange that men right here in America, in this nineteenth century, should lend themselves to Satan's work along in the line that Anthony Comstock has been fighting. This form of iniquity seems to start up here and there, and often where least expected. No matter how many are caught and sent to the penitentiary for disseminating vile literature, the thing has to be *continually* fought. Mr. Comstock has caused the arrest of nearly 2000 different persons within the 22 years that he has been at work. The mails are now so carefully guarded that it is dangerous business for these people to undertake to mail any of their hellish trash. I have been wondering whether it is possible that the only incentive to this traffic should be the *money* they get from it. Years ago, pernicious books would get into the schools. They would be passed about from one boy to another, and sometimes the vile thing would go almost through the school before it was stopped. Fathers and mothers used to be (at least some of them) stupid and indifferent about these things, compared to what they are now. Not long ago a man in one of the streets of New York was handing some packages to children as they were on their way home from school. A little girl received one. She read on

the outside. "Don't open this until you are off alone by yourself." But the Devil made a blunder that time. Keen as he usually is, he got hold of a little girl who had the wrong kind of bringing up for his schemes. She marched straight home to her mother and held up the package. "Mamma, a man gave this to me. What does it mean?" I can imagine how mamma's eyes blazed as she opened the packet enough to divine its meaning. She replied, "Go with me this minute and help me to hunt up that man. He is a thief and a robber. He is worse than a mad dog let loose." The child had faith in her mother, and the two started out. They found him still at his work. A policeman arrested him, Anthony Comstock was sent for, and the man is now serving out a sentence of *eight years* in the penitentiary. May God be praised that we have little girls who will go straight to their mothers with every thing of this sort. May he be praised again for such mothers, and for Anthony Comstock. A few years ago it was customary for agents of this kind to collect the names and addresses of schoolchildren; but the mails are now handled with such keen scrutiny that they have about given it up. They confine their operations mostly to such boys as they can find in the saloons. Intemperance and impurity go hand in hand, arm in arm; and let me say to the few good people who defend tobacco, that Anthony Comstock gained the fierce hatred of almost the entire cigar-trade. Do you know why? It was because he meddled with their business. These dens of infamy had found out that a vile picture could be put into a box of cigars, and neither the man who smoked the cigars nor the man who sold them would "squeal." Why, go into any place where they sell cigars, and look at the pictures on the boxes. Do you want your boy to see such pictures? Do you want that little picture-gallery within his pure unsullied heart embellished with such things as these? Do you want his undeveloped childish imagination to begin *feeding* on things of this sort? Most fathers look back and remember at least times in their lives when they felt the baneful, blasting, withering effects of evil imaginations in this direction.*

Last, but not least, every Christian knows that this sort of sin is the worst foe to spirituality. A boy may be on the eve of giving his heart to Christ—nay, he may be studying for the ministry; and one single vile picture, or one indecent book, may kill out all thoughts of nobler and higher things. Satan is saying, even to-day, "All these things will I give thee if thou wilt fall down and worship me." And, O dear friends! the saddest part of it all is, that many of our promising young men have accepted the bargain. They have, in consideration of what Satan has pictured to their imagination, given up all, and sold their souls to *him*. Yes, *sold* is the word—sold, body and soul; sold to everlasting death and ruin.

There is a hopeful thing about all this, however. The affairs of our State and nation are surely getting, at least to a certain extent, into

*Seed of this sort, sown in the heart at a certain age, takes root and grows with amazing rapidity. "Whatsoever a man soweth, that shall he also reap." And this is *terribly* true of vile things that once get a hold of the youthful imagination. The crop comes, too, oftentimes, in an incredibly short space of time. Do you know where the reaping is done? In the county infirmary and in the insane-asylum. Go visit institutions of that kind; make inquiries in regard to the inmates; and when you get down to the facts you will find that a great majority of the occupants have come there through feeding the *imagination*, at an early age, on this very trash that Anthony Comstock is waging such determined warfare against.

the hands of the *mothers*. The mothers do not use tobacco; and may God be praised for this one comforting thought; and still more comforting—yes, it ought to be a thousand times more comforting, when we reflect that the *mothers* are not and *never can be* in favor of vile pictures and impurity. Every mother knows—in fact, it is stamped on every fiber of her being, that not only the safety of her boys and girls, the safety of the home,* the safety of humanity, the safety of this whole world, of intellect and righteousness, depends almost entirely upon purity in thought and life. Impurity and sensuality are the enemies of the home; they are the enemies of every thing pure and holy. Sometimes it has seemed to me as if there were only one Anthony Comstock in our nation, and that, when he dies, Satan would take courage, prick up his ears, and open up business again. God forbid! Every father should be an Anthony Comstock on the home guard. Every mother is already, if she only knew it. May be she needs waking up a little, and needs to be reminded that she as a mother is one of the officers. Yes, God has chosen her, and God calls upon her to make herself heard and known. May God help us; and may he help me to keep constantly before my eyes and before my imagination that grand little text that should find a prominent place in that little picture-gallery (the imagination) in these hearts of ours. Give it lots of room, and fix your eyes upon it often:

BLESSED ARE THE PURE IN HEART, FOR
THEY SHALL SEE GOD.



MULCHING AND MANURING STRAWBERRIES AT ONE AND THE SAME TIME.

We have about an acre of strawberries that are growing their third crop. We ordinarily let them bear only two years; but we kept working and manuring this patch in order to get plants, and this season we proposed to plow it under just as soon as the last berries were picked. Only part of it was mulched during the winter. We do but little mulching, because we want to work the ground in the spring so as to get nice plants for shipping. But just before

picking-time we found we should *have* to mulch with something. Muddy and gritty strawberries are behind the times. Every strawberry-grower ought to be ashamed of offering dirty berries. On the fairground, near our place, there are some horse-stables where they make a great quantity of loose strawy manure. It is so much straw and so little manure that I pay only from 50 to 75 cts. a load, and this for a load that we bring on our hay-rack. Well, I thought I would use this for mulching to keep the berries off the ground. You know how the frost cut them off, and just about spoiled the Jessies with some others, and then the hot drouth diminished and dried up what few berries were left. Well, we had pretty much given up getting any strawberries worth mentioning; but a pretty good rain came on the evening of the 19th, and lasted during the forenoon of the next day; and almost as soon as the rain was over I was happily surprised to see not only the bright new foliage, but stems of berries sticking up here and there that had just about doubled in size during the rain; that is, they were twice the size they would have been had it not been for the rain and manure. Well, now, that acre of strawberries is bearing considerable nice fruit, and making plants at a tremendous rate, under the influence of the straw mulching and the manure. One objection to stable-manure has been, you know, weed seeds; but if we are going to plow the patch under so soon, who cares for the weeds? The more they come, the better. I propose now to let the whole thing be until both weeds and plants get at their best, then we will take out the best of the plants, with a lump of dirt adhering, and make a new plantation right beside the old one. By this time the weeds will be up so as to be worth something to plow under; and thus we shall have a splendid piece of ground for buckwheat and crimson clover, as mentioned in the last issue, or for any other late crop.

A VISIT AMONG THE STRAWBERRY-GROWERS.

Saturday afternoon, June 15, I started out to see what my neighbors were doing in the height of the berry season. About ten miles northeast of Medina I found the Lawnsdale fruit-farm, on ground high enough so they were affected by the frost but little compared with our own locality. Friend Williams, the proprietor, raises strawberries, raspberries, blackberries, gooseberries, and currants, with potatoes for filling in and to make a sort of rotation of crops. He has about 30 acres of land, and it was really a refreshing sight to behold such a berry-farm right in the midst of a locality where every thing else is devoted to regular farming and stock-raising on a heavy clay soil.

On a northern slope near the road I found about an acre of strawberries that was worthy of a picture; but I did not have the Kodak along that time. The berry-plants are in rows, apparently about four feet apart, like our own. They were so well mulched with straw in the fall that not a berry could find a grain of dirt or soil to rest on. Friend W. hit it exactly in being slow to remove the mulching. He kept the plants back all he could without injury, and then gradually made openings in the straw to let the plants come up through when they were ready to start. By the way, I have never found anybody yet who would remove the mulching with sufficient care to suit me. They would go and claw the straw all away and throw it in the paths. Now, the straw should not be moved a particle. Let the berries go up through it, leaving the straw where it is; then you will have a perfect mat to keep down weeds and to keep the fruit out of the dirt. It also

*A real true home can not well exist without a father and a mother; and impurity would set to work the very first thing to break up a home. A few days ago I took a hasty glance into a popular magazine. Mind, I say "popular;" but in all its long years of record it has never been prominent for its godliness. This magazine was speaking about unhappy marriages, and divorces, and a suggestion was casually thrown out that the home should consist of only the mother and the children, and that grown-up men should be at liberty to go where they please, and do as they please, providing they, *collectively*, support the women and children. In that case we should all of us have mothers but not any fathers. Oh, yes! we should have fathers, after a fashion; but although the boys and girls might know their mothers, each and all, quite well, they might or might not know which father was *their* father. The suggestion has haunted me like a nightmare. It certainly came from the prince of darkness, and from the lowest depths of the bottomless pit. The man who has not manliness enough about him to stand up before the world and acknowledge himself the father of his own children (each and every one), and the lawful husband of the mother of those children, had better spend his life in the penitentiary, for he does not deserve any better place.

serves to keep the berries back so as to avoid a late frost. Only two kinds were on this patch—Crescent and Downing—three rows of one and then three rows of the other, and so on. Varieties that succeed splendidly here in Medina do not prove to be the best there, just ten miles away, and therefore I feel sure it behooves every strawberry-grower to test, say, one row of each of the best kinds prominently before the public; then make a selection of what suits your locality, and stick to your selection. I do not believe any grower wants very many kinds for fruit alone in his locality. It may pay him to have a few Michel's Early, and, say, a few late ones like the Gandy; or if other extra late ones or extra early ones do better, take them instead. Friend W. does almost all the work on his 30 acres with the help of his wife and two children. It keeps them pretty busy, especially during the berry time; but, if I am right, the *happy* families are the *busy* families. I shall long remember the hour I spent in and around that pleasant little home. And, oh! by the way, I picked up

A HORSE-STORY

at that home that I am sure will interest you. Friend W. is about two miles from the town of Brunswick. His girl attends school there, and comes home nights. Now, this will do very well in good weather; but how about bad weather? I will tell you. They have a sagacious, gentle horse that takes the young lady to school every morning, and comes home *himself*. About the time for school to be out he goes back for his young mistress. As there is not any driver he sometimes takes things easy in going the two miles, and does not reach his destination till after school is out. At such times the young lady comes to meet him on foot along the sidewalks that go a piece out of town. He has learned that, when he meets her, he must turn around and go back again; so he watches all the little girls of about her size as they come out of the school and come down his way, turning his head and pricking up his ears while he scrutinizes each miss to see whether she is the one he "belongs to." Sometimes he seems somewhat undecided, and stops in the road to take a better look. When he is satisfied the one in question is not his "best girl" then he goes on for the next, and so on. This brings in an interesting point just here: How far can a horse see, and see plainly enough to distinguish one person from another? I suggested that meddlesome people might tie the horse up, thinking it was astray; and they very soon found that a card would have to be hung on to the harness, to the effect, "You let me alone. I know where I am going, and I am all O. K." After this, especially as the people round about have "caught on," he made his daily trips without hindrance.

THE BARBER BERRY-FARM.

This is about two miles directly north of Brunswick. It is near what they call Stone Hill. As I pushed my wheel up the neat graveled path under the trees, a pleasant-faced woman met me with smiles, telling me her husband was just starting off, but that I could stop him if it were attended to at once. Friend Barber has been in the fruit-business from childhood up, and he has perhaps 50 acres on a gravelly stony hill, devoted entirely to fruits. This hill is a very high one. The slope toward the west must be down a hundred feet or more; and the consequence is, he has his trees and berries loaded with fruit—grapes, plums, cherries, peaches, etc. It was a real pleasure to me to find I was able to name not only all his strawberries, but his raspberries, currants, and some of the blackberries. After experimenting

some he has decided to plant the Victoria currant almost entirely, and nothing else. For raspberries he has the Cuthbert for red, and Gregg for black; some Shaffer's Colossal, and some Marlboro for early. He not only uses the hill, but, like myself, he has a creek-bottom strawberry-patch which is nice to start plants; and when the frost holds off it gives quite a lot of fruit. Various springs in the hillside would probably fill a reservoir sufficient to irrigate his lower grounds, and he is just now planning to have this done.

REDUCING THE EXPENSE OF PICKING.

Friend Williams gave a valuable suggestion right here. Both he and Mr. Barber had their berries picked at the rate of 5 cts. for a four-quart basket. Now, it costs more than this to get our berries picked; but we pick them every other day. Friend W., by using Crescents and Cumberlands, can wait three or even four days, as the berries are firm enough to stand handling, even if some of them are a little overripe. You see, the pickers can work cheaper where the berries are very plentiful. Heavy mulching, with his peculiar soil, perhaps helps to raise berries that will stand this length of time between the pickings.

Before I was half through looking at and sampling the Haverlands, Cumberlands, Jes-sies, etc., the sun was setting, and I was ten miles from home Saturday night. Oh what a nice thing is a wheel! We were back in the fields about half a mile from the road, and the half-mile was up a long steep hill. I suggested that I could cross the fields and strike the road in the valley, as that route would be much less hilly for me for my trip home. Now comes in the advantage of a light wheel. I could hang it over my shoulder, climb fences, or get through bushes, without much hindrance. It made me puff some until I struck the highway, and then what a delight it was to spin along a road almost level! To really enjoy wheeling to its fullest extent you should walk occasionally until you are tired of walking; then the wheel comes in and gives you that delicious rest. A boy in his teens came down from a pretty house by the way, and mounted his wheel. He did not see me; but I thought I would, just for the fun of it, run past him and show him what an 18-lb. Rambler could do. But I did not show him the Rambler at all. Do you know why? Why, he kept ahead of me in spite of any thing I could do, and in a little time he was away off in the distance, clear out of sight, even if his wheel did weigh more than twice as much as mine did. Never mind. I always feel glad when somebody gets ahead of me, even if I had planned otherwise—at least, I hope I do; and I am certainly happy in seeing the boys and girls put distance to naught, even outdistancing myself in it. There seems to be something especially fascinating about wheeling during twilight; and after visiting California and Florida, and experiencing almost sudden darkness as the sun goes down, I enjoy our Ohio twilights more than I ever did before.

My road was a little back from the great highway of travel; but there seemed to be an unusual number of pretty homes. At different times I had visited some of the places, talked with some of the young farmers about tiling their low lands, and utilizing the springs for irrigation, etc., so that the improvements that met my view added largely to my enjoyment. As I neared home I passed through the locality of the Abbeyville Sunday-school that our older readers will remember. Many of my old pupils were now fathers and mothers, having pleasant little homes of their own; and oftentimes the children would glance up at me smilingly,

bringing back pleasant recollections by the resemblance they bore to their parents. As I turned into our own dooryard there was still sufficient light from the bright sky off in the northeast; and I might almost say that I rode ten miles after sundown, and reached home before dark—that is, before it was *real* dark.

With the years of experience I have had in wheeling, I believe I can give some good advice. While this "second wind" is a wonderful and most priceless gift, like other blessings we should try to *use* it and not *abuse* it. In my trip through Missouri, especially on the ride I finished that Saturday night, I overtasked myself. In fact, I am not sure I am *completely* over it even now. In a recent number of the *L. A. W. Bulletin*, a writer made the remark that, whenever a wheelman finds he is unable to sleep nights, he has been overdoing, and I believe this is a pretty good rule. If you ride moderately the use of the wheel is conducive to sleep. If, however, under the influence of this new and may be heretofore unrecognized source of strength, the second wind, you keep on until the wheel seems almost as if it went of itself without any effort of your own, you may find that, when you try to go to sleep, sleep will not come. Another thing, very little strength is required on good roads, and roads that are not very much up hill: but climbing hills, especially if they are very long and steep, is hard on the muscular energy. You get along much easier, and enjoy the trip much more, if you get off and walk when the hill is so steep that it requires much effort, and accustom yourself gradually to long trips. When I commenced this spring, five or ten miles at first seemed to be enough. After you have ridden ten miles a day, however, for three or four days, you can make twice that or more, without much fatigue. Keep increasing the distance carefully and cautiously, and look out for excessive fatigue when undertaking to ride when the roads are in bad order. Be careful, however, about undertaking more than you can manage and do it easily. During extremely hot weather it is better to ride early in the morning, or during the twilight, as I have described. If you are not an expert in handling wheels, let some experienced person examine your wheel occasionally, and see that it is in nice order.

LATHYRUS SILVESTRIS IN BLOSSOM.

In passing a mass of plants this morning, June 21st, after a beautiful rain, I stopped and said, "Well, how in the world did sweet peas get among our lathyrus?" Looking a little closer I discovered that the beautifully colored diminutive sweet-pea blossoms were actually growing on the lathyrus. Why, a field of the plants would be literally gorgeous. Who was it that said it would not bear seed in this country? Well, we have not got the seed yet; but we have the blossoms. Stock seem to eat it about as readily as any of the clovers; and with its tremendous roots I can readily believe it will stand when once it gets root. And notwithstanding this, I should think it would not be a very big job to plow it under after it has been cut or pastured down pretty well.

BUGS ON SQUASHES, CUCUMBERS, MELONS, ETC.

Will you please give a remedy or preventive for the bugs that destroy cucumber, melon, squash, and other plants? If you know of any thing that will destroy these pests, or prevent their ravages, please let us have the benefit of that knowledge at once. J. F. WELTON.

Amboy, Ind., June 24.

Friend W., our mode of warfare is as follows: The minute the plants are up they are watched

morning and evening, and sometimes between times. Just as soon as a bug is found, the vines are treated to tobacco dust. If they still persist, tobacco dust is piled clear over the plants. Sometimes the plants grow up through the tobacco dust sprinkled over the hills. This usually suffices. However, when the bugs come in great numbers, and are very ravenous, or when the black squash-bug comes in great numbers, we try pyrethrum along with the tobacco dust. If they still are doing injury to the plants, then we get the wire-cloth screens, shown in our seed catalog, and fence them out. There are times when the latter seems to be the only real sure remedy: and even these must sometimes be watched to be sure that bugs do not come out of the soil under the wire-cloth screens. Many substitutes are recommended for these latter, such as boxes covered with cotton cloth or mosquito-netting. Striped bugs, however, often manage to get through the netting. If you fight them determinedly, both morning and evening, and show them you mean business, they will very soon give it up. This year we have not had a bug on cucumbers, melons, or squashes: if, however, you have so many things to look after, and they are neglected until they get under big headway, *you* may be the vanquished one instead of the bugs. Slugshot, and other preparations of Paris green, have been recommended: but they have never been as satisfactory with us.

STOWELL'S EVERGREEN SWEET CORN; IMPORTANCE OF GETTING THE SEED OF THE GENUINE.

My dear Friend:—I noticed in GLEANINGS last year, and also in this, what you say about Stowell's Evergreen corn. Your attention seems to have been directed to it last year for the first. I have had it from the time Mr. Stowell first put it on the market—twenty years and more ago. I consider the *genuine* the best sugar corn grown. I lost my seed several years ago, and have been trying in vain to get the *true* Stowell's Evergreen. There is a great deal sold for Evergreen that is not true.

This spring I obtained what I believe to be genuine. I have planted it, and it comes up nicely. I intend making my last planting about the close of this week or beginning of next, which will give table corn into the middle of October, unless a frost cuts it off. I generally have it that long when I have the genuine, as it remains fit for table use a long time after it begins to ripen. Knowing how hard it is to get the genuine, I send you some. The party I got it from told me they got it years ago from Mr. Stowell. Try it: and if it is genuine you will say you never ate better corn.

REV. JNO. L. JANEWAY.

Pawling, Pa., June 15.

Thank you, friend J., for the trouble you have taken to start me with some of the best seed. I shall plant it at once, and I hope we may be able to get mature seed from it.

CURRENTS—THE STEM BORER.

Now is the time to look over the bushes for the stem-borer. We have just finished an acre, and have found from one to fifteen stems cut off in one hill. A moth cuts them off and deposits an egg in the center of the stem, which, if allowed to hatch, will work its way downward through the heart, destroying the branch. We use a sharp knife and cut off about an inch; but in a month from now the worms may have worked down two or three inches. The moth cuts the new growth square off every time, so we cut on a slant. If we go over again, our work can be told at a glance from the work of

the moth. I consider this of as much importance as destroying the currant-worm.

Lodi, O.

W. R. GRANNIS.

ELECTROPOISE.

ROBBING SICK PEOPLE.

Mr. A. I. Root:—We have been victimized by the Electropoise fraud, and would like your advice. We had bought the concern about three months before your first expose of the same appeared in GLEANINGS.

We purchased the thing for a sister who had been troubled with heart disease for a number of years. In the fall of 1893 she was suddenly taken down with grip, and her heart trouble at once became very alarming. She was treated by our family physician all winter, and became some better, but still very weak, when our good doctor was taken sick and died. During the winter there was a kind gentleman here to see us, who had bought an Electropoise for his wife, and said she had been greatly benefited by it, and that he had cured himself of heart trouble, brought on by the use of tobacco, in a short time with it.

When he went home he sent us a lot of circulars, and I am sure he meant well by it, and was as innocent of fraud in the matter as you or I. I can truthfully say I had no confidence in it from the first; but sister read some of the pamphlets, then asked me to read, and we were "taken in" by the endorsement of clergymen, statesmen, and other people of prominence. Our doctor had told us if our sister lived until warm weather came she would get better, which she also did, although she gained strength very slowly. Well, along in May some time, she commenced treating with the Electropoise, and her strength kept slowly increasing. She was to report to the company after each course of treatment, which she faithfully did, and they wrote back to her telling her she was doing wonderful things, and advising her how to proceed. She followed their advice strictly, and on the 26th of August she dropped dead, right in the midst of a course of treatment. I can only say we were stunned, for she was the light of the whole household.

Aurora, W. V., May 27.

LEAH BEACHY.

Of course, no one could claim Electropoise did any harm in the above case, except that these people intrusted a dangerous case to the claims of a fraudulent thing. Had the case been turned over to a competent physician, the girl might have been well now; but no one can tell positively. I suggested to these parties that they state the case to the Electropoise people, and ask them to take the thing back and refund at least some part of their money. An interesting question comes in here. After the patient is dead, and the family have no further use for the instrument, how much would it be worth to the ones who sold it? It cost the purchaser \$25.00; but I am inclined to think the Electropoise people would hardly want to pay more than 25 cents. Rather than commit themselves, very likely they would refuse to take it back at any price. If they want to keep up the fraud, however, it might be a sharp thing for them to pay, say, \$15 or \$20 for it back again. Another point comes in incidentally. A man who had brought on heart trouble by the use of tobacco declared he was cured by Electropoise. Did he keep on using tobacco? If so, then here is a marvelous thing indeed. The instrument has such wonderful virtues as to cure a man from the consequences of a bad habit, and yet permit him to keep on. When we hear what they offer for the thing back again we will let our readers know.

The *Ohio Farmer* has just come to our aid; for in their last issue we find in their Medical Department the following:

While Electropoise, like every thing for cure of illnesses, has wonderful testimonials, we have failed to learn of any case of benefit from its use. True, chance of observation has not been extensive,

but the absence of report of some of those remarkable cures from the sick with whom we mingle is significant. To judge from examination of the instrument, would certainly condemn it. Its name indicates electrical action, but it has not the first appointment for this result. It claims to cure typhoid fever in from four to twelve hours—suppose they mean in the beginning. The price quoted is \$25 for a metallic device about the size of one's thumb, to be worn on the body. It is being much advertised and pushed, and many invalid readers of this paper will be tempted to subscribe for an instrument, as drowning men catch at straws.

It seems from the above that our regular practicing physicians do not meet with the wonderful cures certified by the testimonials.



Anybody who is thinking of building a greenhouse, even a very small affair, will probably find the June number of the *Market Garden* worth the subscription price of the paper for a whole year. This is a special number on greenhouse construction. You had better get one for a sample, any way, if you have not seen the *Market Garden*. Address the Market Garden Co., Minneapolis, Minn.

JAPANESE BUCKWHEAT.

We are having a good trade in Japanese buckwheat as usual this season of the year. So far we have not been obliged to advance the price as we have had to do for several years back. We still have a good stock in reserve, and our price for the present is \$1.20 per bushel; 2 bushels, \$2.20; 5 bushels or over, \$1.00 per bushel; bags included.

BUSHEL BOXES.

The season for using bushel boxes and crates is near at hand, and we would remind our customers that we are still prepared to furnish them at the old price. We have sold three thousand to one party in Pennsylvania, and another thousand to a New York customer, besides other orders, large and small. See advertising columns for further particulars and prices.

CATALOG OF HONEY LABELS AND RUBBER STAMPS.

For a time our supply of label catalogs was exhausted. We now have the new edition ready to mail to all who are interested and apply for one. It contains, besides the old favorites in honey-labels, several new and handsome designs. If you have a choice lot of honey, make it as attractive as you can by neat packages nicely labeled with your name and address. Then when the consumer wants more he will ask for your honey.

NEW 1895 EDITION OF A B C OF BEE CULTURE.

At last we are able to announce the new edition of the A B C of Bee Culture completed. There have doubtless been more additions and changes in this than in any former revision. Many new illustrations have been added. It will be furnished only in cloth binding. Price same as before, \$1.25 postpaid; or clubbed with GLEANINGS for one year \$2.10 for both, postpaid. To all those who have had a former edition at full price we furnish one of the new edition at \$1.00 postpaid, provided you say in your order that you have had one before.

FURTHER DECLINE IN BEESWAX.

During the last ten days there has been a decline of at least 2 cents per pound in the price of wax in New York market. The demand has slackened somewhat, and wax is more freely offered. We quote for the present 23c cash, 26c trade, for average wax delivered here. If you ship wax to us be sure to put your name on the package, and write us at same time; and please remember that we do not agree to pay more for it than we are paying when the wax reaches us. That is, if we should decide on a further decline July 15th, and you should start some wax to us on the 14th, which does not get here till the 18th, we do not pay more than the price

quoted the 15th. When wax was advancing in price, and some parties shipped when we were paying 28c, if it reached us when we were paying 30c the shipper got the benefit of the rise. It is a poor rule that doesn't work both ways. We mention this that none may be disappointed if they don't get as much as they expected, now that the market is declining. We have a good deal of wax on hand which cost us more than we can sell for now.

WANTED—SWEET-CLOVER SEED.

Tell us how much you have, and what you will take for it. At the price that is offered for it now it will pay to cut what goes to seed along the roadside, and it will very soon be making seed in most localities. It seems to me that some of the friends away out in Utah, where it grows all over the great sandy desert, might gather and ship us a carload. If you can not make a carload of seed, then give us a carload of sweet-clover honey, with some seed put in to fill up. There is no better honey in the world than that from sweet clover, and there is no plant that I have ever found that would grow with such thrift and vigor on the poorest, hardest, unfertilized, and uncultivated roadside. Besides all that, it is a valuable forage-plant. We cut it for our horses, and they eat it with more avidity now, since they have learned how, than any thing else in the line of green feed or cured hay. Some people call it a weed; but it is an exceedingly valuable weed. Let your stock get used to it and they will eat up every bit of it, even the hard and dry seed stalks. I believe it succeeds rather better on hard dry clay, or gravelly clay, than on sandy soil, for I never saw any of it in Florida—that is, to amount to any thing.

SQUASHES, RASPBERRIES, STRAWBERRIES, ETC.

June 28.—Well, the striped bugs have found the Hubbard squashes after all; but it was not until the vines had got out a yard or more; and then the bugs centered on the tender tips of the vine. The vines are too old to be covered; and, running so fast, it was hardly practicable to cover them with tobacco dust; so we just brushed the insects off the tender shoots and stamped them in the dirt. They have got now so they will fly as soon as anybody comes in sight. We got a small boy to fight them to the bitter end.

Our Gault raspberries from the first wood are so gnarly and imperfect as to be of no account. This was doubtless the result of the frost. The late crop, without question, will be all right.

We had thought once of discarding the Parker Earle strawberry; but under the influence of the recent rains, after all the other strawberries are gone the P. E. is doing nobly. We are going to hang to it for a late berry. We shall have strawberries sufficiently rooted so as to begin to fill orders—at least small orders—very soon after this reaches you.

THE CRAIG POTATOES.

They are now (June 29) doing finely; but the frost "sat down" very heavily on those we had started in the greenhouse. In fact, it hurt them rather worse than some that were up just a little way, that grew themselves outdoors. They are all, however, now beginning to show the distinct characteristics of the Craig as we knew it last year—strong, rank foliage, in spite of drouth or bugs; and we are just now mulching the space between the rows and around the hills with coarse stable manure—that is, the most advanced ones. This is the same treatment given the ten hills last season, you may remember. The manure is put on after the last cultivating, and just before the tops get so large as to be in the way of the manure.

DOCTORING WITH MEDICINE; A VALUABLE MEDICINE THAT I CAN RECOMMEND.

We have a liniment in our home that we have used for ten years or more that will cure or alleviate almost instantly a good many kinds of pain, such as toothache, earache, sore throat, rheumatism, neuralgia, bowel complaints, etc. This liniment, which we have used so long and like so well, is made by Dr. W. Wayland Wilson, of Billerica, Mass.

During a great part of my life I have been troubled with a chronic sore throat, that sometimes has a tendency toward quinsy. For many years I supposed there was nothing to do but grin and bear it when I felt it coming on. This is especially trying when I am obliged to talk, for talking greatly aggravates it. I have sometimes said I would give a

pile of money to anybody who would get me through this stage of a cold without that disagreeable hoarseness and pain in my throat. Well, "*Physio-anthropic Solution*" will usually give me relief in just about a minute, and it really seems as if the sore throat were driven away after using the remedy, say once in 15 minutes for an hour or two. When diluted with water, with a little sugar added, I find it rather pleasant to take. The rest of the family laugh at the idea of my liking medicine; notwithstanding, there was quite a complaint all around the neighborhood when our last bottle of "*Physianthrop*" was found to be nearly empty a few days ago. Why, the last spoonfuls were divided up like something exceedingly precious, and passed all around the neighborhood. I do not know whether Dr. Wilson will consider this a puff for his medicine or not; but if he would only sell it for 25 cts. a bottle, instead of 50 cts., I should feel a good deal more free to recommend that a bottle be placed in every household. Yet when one considers that a single dose will frequently save calling a physician, it can not be called an expensive remedy. He will, no doubt, send you a printed circular, telling all about it, with great pleasure. He used to be a bee-keeper, or had something to do with bee culture, years ago.

Queens

now ready by return mail, reared in full colonies, from the best honey-gathering strains in America, at the following very low prices:

Tested, - - - each,	\$1.50
" - - - half-doz.,	8.00
Warranted Purely-mated,	.75
" " half-doz.,	4.25
" " per doz.,	8.00

If you want queens for business, get my old reliable strain.

40-page descriptive catalog free.

W. W. CARY,

Colrain, Mass.

In writing advertisers mention this paper.

Crimson Clover Seed!

Having more than I shall sow, I offer it for sale. It was grown on hard land; is acclimated fully. Clean, good seed, and will grow. 2 bush., \$7.00; 1 bush., \$3.75; ½ bush., \$2.00; ¼ bush., \$1.25. No charge for bags.

J. COLBY SMITH,

Willow Grove, Del.

Please mention this paper.

Black and Hybrid Queens For Sale.

I have 1 dozen black and hybrid queens ready for delivery at 30c each. JOE C. MOORE, Globe, N. C.

My order, No. 38,592, came to hand to-day in good shape. I found all the articles all right; also your favor of the 17th, with bill and 30 cts. in stamps, which I did not expect to be within 10 cts. of enough to pay freight on the box of goods, which was 40 cts., or 2c a pound from your place. I think that is very reasonable.

LEWIS WILLIAMS.

Cinnaminson, N. J., May 22.

ALL PRAISE THEM. ————— ITALIAN QUEENS

From the apiary of
W. H. Laws, Lavaca, Ark., can't

————— **BEAT** for **BEAUTY** and **BUSINESS.**

The leading bee-keepers of the U. S. are my customers. Your choice—either Golden or Leather-colored.

Prices Reduced.—Fine breeders always on hand, \$2 to \$3; untested, 75c; 3 for \$2; tested, \$1; 6 for \$5.

W. H. LAWS, Lavaca, Ark.

☞ In responding to this advertisement mention GLEANINGS



We can fill Your Orders

for Dovetailed Hives, Sections, Foundation, etc., by Return Mail. Have A. I. Root Co.'s goods at Their Prices. Will save you freight, and get goods to you in a few days. Catalog free.

JNO. NEBEL & SON, High Hill, Mo.

BEGINNERS.

Beginners should have a copy of the Amateur Bee-keeper, a 70-page book by Prof. J. W. Rouse. Price 25 cents; if sent by mail, 28c. The little book and the Progressive Bee-keeper (a live progressive 28-page monthly journal) one year, 65c. Address any first-class dealer, or

LEAHY MFG. CO., HIGGINSVILLE, MO.

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GOLDEN QUEENS Bred for business. Untested, 65 cents each; 6 for \$3.25. Tested, \$1.00 each. Fine breeders, \$2.00 each extra. Select straight 5-banded breeding-queens, \$4.00 each. To all new customers one **GOLDEN QUEEN** for 50 cts. Satisfaction and safe arrival guaranteed.

E. A. SEELEY, Bloomer, Ark.

P. O. Money Order office, Lavaca, Ark. 7-20

W. O. Victor, of Wharton, Tex., took

45,000 Lbs. of Honey in 1894.

He offers Italian Queens—good, old-style honey-queens—untested, first order, to any address, at 50c each. Also bees in any quantity; 450 colonies to draw from. Root's goods constantly in stock. Prices to suit the times. Buy near home, and save freight.

ITALIAN BEES Ready in May. Queens, \$1.00. Bees by the pound, \$1.00. One-frame nucleus with queen, \$2.00; two frames, \$2.50. Also Barred Plymouth Rock eggs for setting, \$1.00 per 15.

6-17ei

MRS. A. A. SIMPSON, SWARTS, PA.

Look Here, Bee-keeper!

If you are in need of bee-supplies, write for catalog and price list. Every thing sold as cheap as the cheapest.

W. E. Smith.

Queens, Either 3 or 5 Banded.

60c each; 6 for \$3.25. These low prices are to induce you to try them. Catalog free.

CHAS. H. THIES, Steeleville, Ill.

TAKE NOTICE!

BEFORE placing your orders for SUPPLIES, write for prices on One-Piece Basswood Sections, Bee Hives, Shipping-Crates, Frames, Foundation, Smokers, etc.

PAGE & LYON MFG. CO.,

8tdfb

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21-8db

Promptness is What Counts.

Honey-jars, Shipping-cases, and every thing that bee-keepers use. Root's Goods at Root's Prices, and the Best Shipping-point in the Country. Dealers in Honey and Beeswax. Catalog free.

WALTER S. POWDER,

162 Massachusetts Ave., Indianapolis, Ind.



HEADQUARTERS

For those large beautiful Golden Italians. One untested queen, 80c; 3 for \$2.00. One warranted queen, \$1.00; 3 for \$2.50. One tested, \$1.50; One select tested, \$2.00. Satisfaction guaranteed.

C. M. HICKS, Hicksville, Wash. Co., Md.

IF YOU WANT BEES

That will just "roll" in the honey, try **Moore's Strain of Italians**, the result of 16 years' careful breeding.

Dr. H. B. Lung, Harrodsburg, Ky., says: "I have had the pleasure of seeing many fine strains of bees, yet I have never seen such industrious, energetic bees. I must express my admiration for your success as a bee propagator."

Warranted queens, 80c each; 3 for \$2.00. Select warranted queens, \$1.00 each. Safe arrival and satisfaction guaranteed.

Those who have never dealt with me, I refer to A. I. Root, who has purchased of me 808 queens. Circular free.

J. P. MOORE, Morgan, Pendleton Co., Ky.

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mention GLEANINGS.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest, it is usually worked the quickest of any foundation made.

J. VAN DEUSEN & SONS,

12tfdb Sole Manufacturers,

Sprout Brook, Montgomery Co., N. Y.



World's Fair Medal

Awarded my **Foundation**. Send for **free samples**. Dealers, write for wholesale prices. Root's new **Polished Sections** and other goods at his prices. **Free** Illustrated Price List of every thing needed in the apiary. **M. H. Hunt.**

Bell Branch, Mich.

Control Your Swarms, Requeen, Etc.



Send 25c for samples of West's Patent Spiral wire Queen-Cell Protectors, and Pat. Spiral Queen Hatching and Introducing Cage, also best Bee-Escape, with circular explaining. Twelve Cell-protectors, 60c; 100, \$3. 12 cages, \$1; 100, \$5, by mail. Circular free. Address **N. D. WEST, Middleburgh, Scho. Co., N. Y.**

Sold also by all the leading supply-dealers.

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